



Make it '90

Farm Management Conference

at the Hilton International, Saint John, N.B.

Managing
Agriculture
Keeping
Everyone

In
Touch

FARM MANAGEMENT CONFERENCE

(FARM MANAGEMENT CHALLENGES)

March 11-13, 1990

Hilton International Hotel
Saint John, New Brunswick
Canada



**Agriculture
Canada**



**New Brunswick
AGRICULTURE
Nouveau-Brunswick**

MAKE IT '90 EVALUATION

New Brunswick hosted its Second Farm Management Conference at the Hilton International Trade & Convention Centre in Saint John from March 11 - 13, 1990.

The conference was entitled Make It '90 (an abbreviation for Managing Agriculture: Keeping Everyone in Touch). The purpose of the conference was to provide progressive farmers and their spouses, agricultural business, agricultural advisors and others interested in farm management skills with a variety of topics addressed by high calibre resource people. The main themes of the conference centred around farm management, communication, finance, changes in technology and world events that affect agriculture.

The conference was modeled after similar conferences held in Alberta, British Columbia, and Nova Scotia. The format offered three plenary sessions, and six sets of four concurrent sessions. An evening of bearpit discussions where participants could approach the speakers on a more informal and individual basis was held.

A total of 155 participants attended Make It '90.

	NB	NS	PEI	NFLD	USA	ALT	FED	TOTAL	%
Producers	84	0	2	0	0	1	0	87	64.4
Government	17	1	2	2	0	0	1	23	17.0
Industry	12	0	0	0	2	0	0	14	10.4
Other	9	0	0	0	0	0	0	9	6.7
Federation	2	0	0	0	0	0	0	2	1.5
Total	124	1	4	2	2	1	1	135	
%	91.8	.73	3	1.5	1.5	.73	.73		100%
Speakers								16	
Media								4	
Grand Total								155	

The registration fee was \$140 per couple and \$100 per person. The rate changed to \$160 and \$120 respectively after January 30.

The total cost of the Conference was \$55,020.98. The funding of the conference came from registration fees, sponsorship by industry and the New Brunswick Department of Agriculture under the Canada/New Brunswick Co-Operation Agreement on Agri-Food Development.

ACKNOWLEDGEMENTS

Our thanks and appreciation to the following organizations for their support:

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- Maritime Sod

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Sponsored by the New Brunswick Department of Agriculture under the Canada/New Brunswick Co-Operation Agreement on Agri-Food Development.

COMMITTEE

Dr. Chesley E. Smith, Chairman
Director, Agriculture Resource Development Branch
NB Department of Agriculture, Fredericton, NB

George Maicher, Co-ordinator
Supervisor, Farm Management,
NB Department of Agriculture, Fredericton, NB

Percy Waddy
Farmer and NB Milk Marketing Board Representative,
Salisbury, NB

Andre Methe, Farmer and Representative,
Federation des Agriculteurs et Agricultrices
Francophones du N-B, Cap Pele, N-B

Gary Gunter, Farmer and Representative,
NB Federation of Agriculture
Bear Island, NB

Nelson Paradis, Regional Farm Management Counsellor,
Grand Falls, NB

Neal Mundle, Regional Farm Management Counsellor,
Wicklow, NB

Phil Parlee, Regional Farm Management Counsellor,
Sussex, NB

Duncan Fraser, Regional Farm Management Counsellor,
Fredericton, NB

Jack Wetmore, Farmer - Nursery
Fredericton, NB

Joyce Ferguson, Farm Management Technician,
Fredericton, NB

Barry Russell, General Manager, ADLIC
Moncton, NB

Peter Rogers, Research & Planning Officer,
NB Dept. of Agriculture,
Fredericton, NB

Ike Gallagher, Farm Management Specialist,
NB Dept. of Agriculture,
Fredericton, NB

Topics and Speaker

Pre conference:

Taking the Byte out
of Computers

Peter Rogers
Research & Planning Officer
NB Dept. of Agriculture

Opening Address:

Concern for the Quality
of Life: A Condition for
Sound Farm Management

Jacques Brodeur
Professeur a l'I.T.A.
de Saint-Hyacinthe, Quebec

Managing to Survive or
Surviving to Manage

Hon. Oliver Walston
Farmer and Author
Thriplow, England

Concurrent Sessions:

Daily Life on the Farm:
Between Violence and
Affection

Jacques Brodeur
Professeur a l'I.T.A.
de Saint-Hyacinthe, Quebec

*Global Warming: The
Need for Objectivity

Tim Ball
Associate Professor
University of Winnipeg

*Water: The Resource
Issue of the 21st
Century

Tim Ball

Preventive Machinery
Maintenance

Rudy Klein
Farm Equipment Mechanic
Fults, Illinois

Five Traits of a
Good Parent

Don Shaw
Co-ordinator of Health Education
Jefferson County Schools
Lakewood, Colorado

Whose Problem?

Don Shaw

Farm Families -
Managing in the 90's

Gary Bradshaw
Supervisor of Financial Management
Alberta Dept. of Agriculture

Organic Farming: A
Rich Man's Luxury

Hon. Oliver Walston
Farmer and Author
Thriplow, England

Building Better Working
Relationships Between
Farm Family Members

Ron Hanson
Professor of Agribusiness
University of Nebraska

Agriculture Under the
Canada - U.S. Trade
Agreement: Implications
For Agriculture

Bill Musto
Director of Management Consulting
Deloitte & Touche
Halifax, Nova Scotia

Sustaining A Loving
Marriage: Renewal of the
Sexual Experience

Kate Harling
Sex Educator, California

Farm Management Clubs

Andre D. Beaudoin
President of the Quebec Federation
of Farm Management Clubs
Executive member of the Quebec Farm
Management Council and U.P.A.

Communicating on the Farm

Gilles Perreault
Victoriaville, Quebec

Goalsetters Are
Goalgetters

Barry Russell
General Manager - ADLIC
Moncton

Organic Farming

Rodrique Bouchard
Dairy Farmer
Lac St.-Jean, Quebec

The Economic Value of
Women's Work

Lisa Maureen Birch, Farmer
Masters Student - Agribusiness Economics
Laval University

Organized Marketing of
Agricultural Products

Daniel M. Gouin
Professor of Agricultural Economics
Laval University

Agricultural and
Technological Evolution
Computerized Agriculture

Angele St-Yves
Vice-President of l'Ordre des
Agronomes du Quebec

Closing Address:

Laughter - A Mega-Vitamin
for the World

Valerie Kates
Toronto, Ont.

* Tim Ball was unable to attend due to illness.

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Program

Sunday, March 11, 1990

11:30 a.m. - 6:30 p.m.
12:00 p.m. - 5:00 p.m.
7:00 p.m. - 9:00 p.m.
9:00 p.m. - 11:00 p.m.

Registration
Computer Room Open
Opening Address
Wine & Cheese Reception

Monday, March 12, 1990

8:15 a.m. - 8:30 a.m.
8:30 a.m. - 10:00 a.m.
10:00 a.m. - 10:30 a.m.
10:30 a.m. - 12:00 p.m.
12:00 p.m. - 1:30 p.m.
1:30 p.m. - 3:00 p.m.
3:00 p.m. - 3:30 p.m.
3:30 p.m. - 5:00 p.m.
6:00 p.m.
6:30 p.m.
7:30 p.m. - 9:30 p.m.
9:30 p.m. - 1:00 a.m.

General Session
Concurrent Sessions
Coffee Break
Concurrent Sessions
Lunch
Concurrent Sessions
Coffee Break
Concurrent Sessions
Cash Bar
Banquet
Bearpit Session
Dance

Tuesday, March 13, 1990

8:15 a.m. - 8:30 a.m.
8:30 a.m. - 10:30 a.m.
10:00 a.m. - 10:30 a.m.
10:30 a.m. - 12:00 p.m.
12:00 p.m. - 2:00 p.m.
2:00 p.m. - 3:00 p.m.

General Session
Concurrent Sessions
Coffee Break
Concurrent Sessions
Lunch (Check Out)
Closing Address

Results of the evaluation questionnaires (64) from MAKE IT'90:

1. Prior to registration you obtained adequate information about the conference.

1. strongly agree	42%
2. agree	45%
3. in between	4.6%
4. disagree	1.5%
5. strongly disagree	4.6%

2. The promotional description of this conference accurately described what took place.

1. strongly agree	28.5%
2. agree	52.1%
3. in between	9.4%
4. disagree	5.0%
5. strongly disagree	5.0%

3. Your expectations of this conference were met.

1. strongly agree	36.2%
2. agree	39.3%
3. in between	18.0%
4. disagree	1.6%
5. strongly disagree	4.9%

4. The bearpit sessions were worthwhile.

1. strongly agree	34.0%
2. agree	48.2%
3. in between	10.7%
4. disagree	5.4%
5. strongly disagree	1.7%

5. The content of this conference gave you new ideas for your farm business.

1. strongly agree	34.4%
2. agree	50.8%
3. in between	9.8%
4. disagree	1.7%
5. strongly disagree	3.3%

6. You would recommend this conference to neighbours and other farmers.

1. strongly agree	58.7%
2. agree	34.9%
3. in between	1.6%
4. disagree	1.6%
5. strongly disagree	3.2%

7. Your occupation is:

1. Producer	75.5%
2. Agribusiness	6.6%
3. Government	8.2%
4. Other	9.8%

Comments:

- 1 Hogs
- 4 Mixed Farmers
- 4 Potato Farmers
- 23 Dairy Farmers
- 3 Horticulture
- 1 Wife
- 3 Beef Farmers
- 2 Apple Orchard Owners
- 1 Student
- 1 Architect

8. How did you hear of this conference?

1. Mailout	60%
2. Regional Office	38%
3. Newspaper	0%
4. Radio	1.5%
5. Friend	22%
6. Commodity Group	1.5%

9. What was your overall evaluation of the conference?

1. Excellent	36%
2. Very Good	52%
3. Good	10%
4. Fair	2%
5. Poor	0%

Comments:

- didn't like session on sexuality
- well rounded topic selection
- more of Don Shaw
- Enjoyed Don Shaw especially
- would like more speakers for 'entry-level' farmers
- talks could have been 1 hour maybe, otherwise excellent topics
- didn't like the intimidating factor of the doors being locked at the commencement of a session
- really appreciated everything running on schedule
- would like to see a good marketing seminar
- gives a fresh outlook for business
- quality of the conference was excellent and enjoyed very much
- see you in two years

- was disappointed that Mr. Walston's presentation was really short
- single session presentation would allow more variety
- everything was great
- well organized
- Free trade speakers didn't appear well grounded but free trade is always changing
- media should be advised that the comments of conference participants should not be released to the general public without authorization

10. Have you attended a previous Farm Management Conference?

1. Nova Scotia	40.6%
2. Make it '88	43.4%
3. Alberta	1.6%
4. Quebec	9.4%
5. Other	3.1%
6. No	1.6%

11. The choice of sessions:

1. Adequate	80%
2. Too Many	14%
3. Too Few	5%
4. N/A	1%

12. The number of financial planning topics should be:

1. Increased	17%
2. Left the same	78%
3. Decreased	0%
4. N/A	5%

13. The number of human resource topics should be:

1. Increased	20%
2. Left the same	74%
3. Decreased	3%
4. N/A	3%

14. The number of planning and production sessions should be:

1. Increased	20%
2. Left the same	70%

15. What format features of the conference did you like or dislike:

	Liked	Disliked
1. Opening Address	94%	6%
2. Concurrent Sessions	90%	10%
3. Bearpits	96%	4%
4. Closing Address	83%	17%
5. Computer Room	33%	67%

Comments:

- computer room was not open at convenient time or staffed by knowledgeable people
- Ron Hanson and Don Shaw were excellent
- opening was good but a more uplifting speaker could be used to get people energized
- try to avoid negative comments regarding companies who refused to sponsor
- better if sessions weren't locked
- too many topics were missed
- everything started on schedule
- didn't enjoy Kate Harling. Was not impressed by the contents of her address
- the opening address was too technical and boring
- sessions were too long
- wasn't as good as Make it '88
- distraction was easy when using the translational device
- not enough adequate time for each session
- not enough sessions on production
- felt that we were treated more like children than adults
- sex therapy was too intense
- program was well balanced

16. What other topics would you have liked included in the conference? Any suggestions of speakers you have heard that would be appropriate for this type of conference?

Comments:

- Dr. Morley - 1988 Conference - Global Market Place
- Winston Cousins - PEI Dept. - Crop Variety & Cost of Production
- Denis Waitley - Building Self-Esteem
- Thomas Frey - Credit Management
- Alan Simons - Motivational Therapist
- How to analyze a balance sheet
- Greenhouses
- Irrigation
- Plastic Mulch Use
- Organic Farming for Small Vegetable Operations
- a little more on potatoes
- Farm Management
- World Economic Situation

- Agriculture s place in the world
- Family Living
- Positive Thinking
- Forming Corporations or Partnerships
- Raising Kids on the Farm
- Farm Womens Responsibilities
- experts on farm buildings
- Animal Rights Movement in Canada
- more talks specifically on dairy
- Demonstrations of computer software

17. How much would you be willing to pay for a conference of this type in the future?

Per Couple			Single		
1.	\$100 - \$140	45%	1.	\$100 - \$120	65%
2.	\$140 - \$180	30%	2.	\$120 - \$140	30%
3.	\$180 - \$200	5%	3.	\$140 - \$160	5%
N/A			20%		

Comments:

- we would consider \$200 but really feel with rooms we couldn't pay anymore
- the price of the conference was extremely low
- fee was very adequate
- ability to pay and value are two different things
- I found the rate an exceptional value
- keep the prices low for the new farmers who don't have alot of extra money
- for a really good set of speakers I would pay a higher fee

18. When is the best time of year for a conference like this?

1.	January	8%
2.	February	22%
3.	March	70%
4.	During the School Break	5%
5.	Late Fall	3%

19. Do you prefer the conference on:

1.	Weekend	17%
2.	Weekdays	14%
3.	Split (similar to this conference)	70%

20. The length of the conference should be:

1.	increased	3%
2.	remain the same	97%
3.	decreased	0%

21. If a similar conference was held in the future would you attend?

1. next year	22%
2. three years from now	75%
3. two years from now	3%
4. would not attend	.5%

22. If a similar conference was held in the future, where would be the best location:

1. Saint John	65%
2. Fredericton	16%
3. Moncton	19%

23. A. Rate the meals:

1. excellent	27%
2. good	45%
3. adequate	10%
4. fair	13%
5. poor	3%

B. Rate the accommodations:

1. excellent	60%
2. good	28%
3. adequate	1%
4. fair	1%
5. poor	0%

C. Rate the conference facilities:

1. excellent	63%
2. good	30%
3. adequate	7%
4. fair	
5. poor	

24. The sessions were rated on content and presentation:

- | | | |
|--------------|--------------|---------|
| 1. excellent | 2. very good | 3. good |
| 4. fair | 5. poor | |

<u>Topics</u>	<u>Speaker</u>	<u>Score</u>	<u>Number of Evaluations</u>
Communicating on the Farm	Gilles Perreault	1.0	4
Five Traits of a Good Parent	Don Shaw	1.1	24
Whose Problem?	Don Shaw	1.1	45
Building Better Working Relationships Between Farm Family Members	Ron Hanson	1.3	25
Every Day Farming: Between Violence and Affection	Jacques Brodeur	1.3	5
Farm Families Managing into the 90's	Gary Bradshaw	1.45	34
Managing to Survive or Surviving to Manage	Oliver Walston	1.95	41
Laughter - A Mega Vitamin for the World	Valerie Kates	2.15	34
Preventive Machinery Maintenance	Rudi Klein	2.2	14
Goalsetters are Goalgetters	Barry Russel	2.2	26
Organic Farming: A Rich Man's Luxury	Oliver Walston	2.25	21
Concern for the Quality of Life: A Condition for Sound Farm Management	Jacques Brodeur	2.4	8

The Renewal of the Sexual Experience	Kate Harling	2.65	45
Organic Farming	Rodrigue Bouchard	2.65	12
Farm Management Clubs	Andre Beaudoin	2.7	3
Agriculture & Technological Evolution	Angele St. Yves	3.0	6
Organized Marketing of Agricultural Products	Daniel M. Gouin	3.2	7
The Economic Value of Women's Work	Lisa Maureen Birch	3.25	8
Free Trade	Bill Musto	3.3	14

25. General Comments on the Conference:

- Enjoyed being able to share ideas with others
- Kate Harling was unacceptable
- Ron Hansen and Kate Harling were very interesting
- Committee did a fantastic job
- Well organized
- Too much money was spent on accommodating the french
- bearpit could have been better if it was held in a hospitality suite.
- the session which ran for two sessions limited the selection
- want to see more Don Shaw
- food was excellent
- dance was great - loved Gary Morrison's Band
- really enjoyed Kate Harling
- didn't like the idea of concurrent sessions
- hospitality room should be open to everyone at the conference
- enjoyed Ron Hansen and Don Shaw's presentation the best
- the wine & cheese party and the dance were a waste of time
- Ron Hansen was very informative
- Kate Harling's session had some good points but it was too long.
- Press too free in quoting participants.
- Great sponsors
- didn't attend french session because the use of a translator takes away the effectiveness of the speaker
- more humour

- some sessions should be offered more than once so we can see the ones we want
- enjoyed the round the table discussions after the sessions
- Don Shaw's session on parenting was excellent.
- didn't see Ron Hansen because of lack of time, his session should have been on both days
- Kate Harlings session had a really good session on a sensitive topic
- enjoyed topics
- try to keep it to one session per person
- I was disgusted with Kate Harlings talk. It was definitely a waste of time
- enjoyed having the committee people around where you could find them
- very informative, very interesting, and most enjoyable
- didn't enjoy Bill Musto or Angele Ste. Yves
- enjoyed the conference immensely
- Rudi Klein was very informative on machinery repair
- didn't enjoy being pestered about the sessions starting on time
- excellent human resource presentation
- found the sessions rather long
- would like to see the banquet held after the bearpit

26. Did you attend the Pre-conference session on computers?

- | | |
|--------|----|
| 1. yes | 27 |
| 2. no | 30 |

Comments:

- not worth the \$15
- very informative
- not worth it
- very helpful
- learned alot about computers
- better than expected
- Computers don't interest me
- quite informative
- interesting but not what I expected
- very informative on what to buy, who to trust, and what to look for
- thanks for saving me alot of money
- software display would have been better
- I plan to attend training sessions on how get the most from the computer
- needed more knowledgable people
- not what I expected. Thought it would involve hands on computer

- speaker brought up some good points but computers cannot be explained in a few minutes to someone who doesn't understand them
- found that the speakers were so knowledgeable that they talked over our heads

Daily Concern for the Quality of Life-
A Criterion for Sound Management in the Future

by Jacques Brodeur
New Brunswick, March 1990

A Tribute to the Creative Intelligence of Farmers

The theme of this conference, "Make it '90", is a tribute to the creative intelligence of today's farmers. For even though we consider ourselves realistic and informed managers, sensitive to the numerous factors in our economic, physical, and cultural environments, we recognize from experience that the future exists only in our creative imaginations. When this future actually does arrive, it will be called "today." Similarly, when today we think about our future, to some extent we are working to improve our present. This statement explains the title of my presentation: "Daily Care for the Quality of Life in Agriculture - A Condition for Sound Management of the Future."

A Tribute to the Next Generation of Farmers

My talk this evening owes a great deal to the hundreds of agriculture students I have been teaching for 13 years now. They are living testimony to the farm mentality that is constantly changing. Proud of considering themselves the farm managers of the year 2000, this upcoming generation represents the full range of hopes and doubts generated by both our technical and economic management theories and our theories on human happiness. The following observations reflect these hopes and doubts.

Outline of the Presentation

I am proposing three lines of thinking. First, I will examine with you the concepts of quality of life and farm management offered by our consumer society. Secondly, I will describe under what conditions quality of life and farm management can become daily concerns that will humanize life on the farm. Thirdly, I will suggest a few concrete actions that could improve our human lives in agriculture...starting tonight.

Part One

The Quality of Life and Farm Management in our Consumer Society

Many people envy the quality of our lives

Only very recently has the "quality of life" become an advertising catch phrase. In the name of quality of life, we are offered cars, condos, tractor cabs. You scarcely need a Ph.D. to recognize that the concept of quality has swung from the realm of being to the realm of having. Today more than ever, being someone means having something. I am worth what I have: a reputation, a business, a healthy bank account, state-of-the-art technology, etc.

But only for the future, if you are the young head of a farming operation

In the farm world, particularly if you are young, quality of life is presented as a future possibility, like a reward or a prize collected after a test. "Work hard for five to ten years without counting the hours you put in, first make sure your business is financially secure through sound management, and only then will you have time for yourself. And like everyone who has succeeded in business, you will have access to quality of life, to trips to the Caribbean, new cars, ski outings." Talk like that seems realistic. Many of the upcoming generation say automatically that the quality of life in agriculture means being able to take vacations far from the farm. As if the reason for living on the farm was to earn the money needed to get away.

Quality of life and sound management: two concepts that have become vague

Now, even though everybody talks about the quality of life, very few people see it other than from the viewpoint of consumption. But what if we saw it as a principle of management instead of simply as a result of efficient management? That would be somewhat like saying a love of the sea inspires a management technique that leads to the purchase or rental of a sailboat, and not the reverse. Let us suppose for a moment that the quality of our own lives and our neighbors' lives were the chief inspiration of all farm operation management. Then another question arises: What vision of human life does our concept of quality of life imply? Admittedly, neither the consumer society nor what we call the manager mentality has any interest in this type of question.

The manager mentality and its effects

The manager mentality must not be confused with business management which, as we know, is defined as a set of theories and techniques serving organizational efficiency and profitability. Manager mentality means a state of mind that assigns importance only to what can be expressed in figures. In other words, the only reality worth respect and consideration is measurable, quantifiable reality. In that light, human activities, people and things have substance only to the extent that they can be subjected to calculative thinking, as Heidegger might say.⁽¹⁾ How do we spot the manager mentality at work around us, at our place, at your place, at mine? A few signs expose it.

- First sign: Manageritis

You will not find the word "manageritis" in a dictionary. Yet one day it may designate the professional hazard of some managers who have become incapable of talking about anything else except challenges, investments, subsidies, tough market conditions, inadequate productivity etc. The least surprise upsets them. Human problems frighten them, because they cannot handle them. Or if they do deal with them, they treat them as subjects stripped of all complexity. These managers afflicted with manageritis become increasingly incapable of renewing themselves in the presence of human beings, unless these are also managers. They become insensitive to nature, or simply scenic beauty. - I remember a producer who responded to my marvelling at the beauty of his operation by saying, "Yes, but it's expensive!" As if I didn't know.

- Second sign: Anxiety

In his book, Le marché de l'angoisse (2), Dr. Pradal writes, "The market economy quantifies how we live and gives it an economic dimension encompassing all our acts, all our desires, and most of our physiological functions and our illnesses... Perhaps that is why modern man loses all sense of a real existence if cut off from his economic environment. The merchandise civilization has molded the individual to produce and to consume (including quality of life): if he no longer has these two reasons for being, he loses the mirror in which he can see himself and in which others can see him. His human value is directly related to the intensity of his participation in economic exchange."* These statements could spark some interesting discussions among farmers, but we do not have the time...

* Translation provided by the Translation Bureau

- Third sign: Figures have discredited words

Another effect of the manager mentality is the suspicion surrounding conversation at some farms. I am not talking about functional speech, words that explain the new machine or define the chores that have to be done. No, I am talking about another kind of speech, conversation, the words used to share personal impressions, fears, sadness, tiredness, misunderstandings, secret admiration for one's spouse, one's father, one's son, one's daughter.

- Fourth sign: Identity crisis

The American psychologist Erich Fromm, who is known for his writings on management, bureaucracy, the art of loving and identity problems, establishes a very close relationship between the idea we have of ourselves and the qualities of our ties with nature. If the only relationship I have with the earth, he says in effect, is one of owner and ruler, I will inevitably have problems adjusting to the world and to others.

When this perspective prevails, identity crises abound. People no longer know who they are...They know only what they have or what they are afraid of losing...They are constantly on the defensive to protect themselves from anybody or from any experience that might trouble the security of their mummified existence.(3)*

Summary of Part One

What may we conclude from these few observations? We have not yet defined what quality of life is, but we have said that neither our consumer society nor the manager mentality can deal with quality of life and management other than in terms of the production or consumption of material goods. In this light, quality of life is reduced to a simple matter of material possession, and management of an operation becomes simply a technique at the service of possession. This leads us to the second part of our presentation, which attempts to show that quality of life and farm management are daily concerns which, far from crushing human beings, help them grow both personally and professionally.

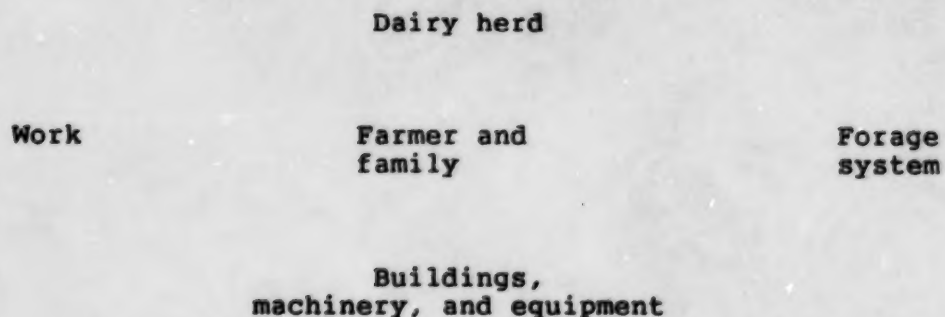
* Translator's note: This is not the original text of E. Fromm's The Revolution of Hope. The author of this document has failed to indicate the number of the page in the French translation on which the quotation is found. Unfortunately, time does not permit the library research, reading, and comparison of texts required to identify the English version. The Translation provided by the Bureau is intended solely to facilitate comprehension.

Part Two

The Quality of Life and Farm Management: Two Concerns that Humanize Life

Taking the time to think about the quality of our lives requires a minimum of effort, which runs counter to the view that associates quality of life with a lack of effort. Making the quality of life a daily concern is to make it an ongoing concern aimed at humanizing our daily chores. Similarly, making management a concern, not just a technique, means taking care constantly of all the components of a farm operation: the family, the land, the buildings, the animals. It is worth recalling that "taking care" used to be the equivalent of "managing". Hence the expression "taking care of livestock"...

Both in Quebec and in New Brunswick, farm circles are becoming more and more open to comprehensive visions emerging from systematic thinking, from a constant concern to understand the realities involved. The popularity of courses on management and research on the quality of life show that farmers no longer define themselves simply as hard workers, but above all as architects thinking about each part in relation to the whole.

Table 1: Comprehensive Diagram of the Farm

This diagram depicts the essential links between subsystems: buildings, animals, fields, work, etc. The buildings, therefore, do not exist for their own sake, but in relation to the herd, the forage, or the work. Obviously, the starting point, the core of the operation, the engine, and ultimate purpose of the operation is the farmer and his or her family. Also, one might stress the growing importance of the cultural and physical environment alongside the economic environment.

Table 2: Comprehensive Diagram of the Quality of Life

Awareness of my philosophy of life		
Occupation	Open-mindedness	Family harmony
Ethics	I live	Dialogue
Solidarity	my life	Affection
Ambition		Presence for others
Physical health		Mental health
Fitness		Mental hygiene
Relaxation		Place in nature
Nutrition		Confidence
Biological cycles		Self-esteem

This Table associates quality of life with the emotional, moral, and vocational self-fulfilment of human beings. Such self-fulfilment implies mutually enhancing relationships between members of a family. It makes it possible to see the interaction between professional life, physical and mental health, intellectual and spiritual renewal, the aesthetic and symbolic dimensions of every conscious act, etc.

If any one element in the Table is inoperative or forgotten, or tries to take all the room, a crisis is on the horizon. For example, if we neglect our mental health, we can function for a time, but in the long run, burnout, hyperactivity, or depression can enter the picture. Nor is it a matter of determining whether money is more important than health or love, but of seeing how money, health, and love are interconnected. The willingness to take all these factors into consideration is what I mean by a daily concern.

Philosophy is fine, but my creditors won't wait...

This is a classic objection in the world of business and in farming. When I hear it, I answer somewhat jokingly, "Nor will the creditors or the tractor." In fact, the tractor does not wait until the work is done before stopping if it runs out of fuel. The annoying thing about human beings is that we have lost the set of instructions, said writer and philosopher Arthur Koestler (4). For lack of self-knowledge, human beings burn up their bodies and risk making them more irreparable at times than their machinery. You can remove a cylinder head, but not the head of the person driving the tractor!

Some farmers are not aware of their own philosophies

Everyone has a philosophy of life, but not everyone is conscious of it. If we want to know the secret philosophy that inspires our daily lives, we should ask those who live with us. For our actions, our management, our words, and our silences are determined by the nature of our ideas and by the contents of our imaginations. To illustrate this, we need only think of some of the ways we treat nature or human beings.

Our philosophy of nature determines how we treat it

I often hear certain students and producers describing the soil, temperature, wind or rain as "hindrances." According to this type of language, nature is the enemy or adversary. This fundamental divorce between nature and human beings, according to some anthropologists, is what accounts for the anxiety of modern farmers.

Our philosophy of human beings determines the atmosphere of work on the farm

The producers I meet have two ways of distributing the daily chores. Some seem to care more about the work to be done than about the son, daughter, father, mother, or employee who has to do the work. And that is reflected in remarks like, "Around here, we don't waste time...Around here, you have to get rolling...Around here, it's the work that counts...Around here, we don't waste words." On those farms, people usually talk loud and everybody talks at the same time. They laugh, especially when they have visitors.

There are also farmers' families, not necessarily the richest or the poorest, for whom people count more than the things that have to be done. The chores to be done are distributed in an atmosphere of remarkable mutual consideration: questions are asked about whether people are available, their interests are known, and all sorts of negotiations occur among brothers and sisters, and even with employees. Schedules are drawn up by checking whether they suit everyone. More often than not, these families eat their meals together.

In these farmers' families, the work is usually done better, and "the machines break down less often," said one farmer. Parents, children and employees feel mutually appreciated. To put it briefly, in these farm operations, each and everyone has understood that others also exist and that each individual's contribution depends on the contribution of others. And, as if by chance, there's still time for laughter, teasing, explanations, and apologies if somebody has hurt another.

And when the time comes for the big decisions, transfer of the estate, or a new form of business arrangement, the degree of consideration and mutual respect that has always characterized daily life is conducive to harmony between everyone in the family.

Summary of Part Two

In concluding this second part, in which we have tried to place the quality of life and management in a context of basic thinking, a comprehensive vision, and a philosophy of life, I would like to introduce certain statements made by world-famous management expert Professor Henry Mintzberg of McGill University. At a recent lecture given in Montreal and covered in the January 23rd, 1990 edition of La Presse, Mintzberg urged managers to "look beyond the figures." He also attacked the "dangerously popular concept of efficiency," which tries to measure the relationship between a minimum of resources and a maximum of results. Mintzberg unequivocally stated that business costs have led managers to neglect the social costs of their activities, so that "efficiency often leads an organization to adopt an economic morality that can be equivalent to social immorality".

In applying these statements to farm operations, we find they encourage the development of real concern, not only for the economic and financial dimensions of our farms, but even more for the people who live on them. How does this concern express itself in daily life? That question brings me to the final part of my presentation.

Part Three

Daily Concern for a Life of Quality in Agriculture

This final section of my presentation is based on an observation and study project carried out last November by 60 students at the Institut de technologie agro-alimentaire de St-Hyacinthe. Each student was asked to list his or her family's traditions. These traditions covered habits, rules of daily life, high points, each family's particular rituals, etc.

This produced a mass of information that could be interpreted as indices of the quality of life. I will give you some of this information and leave you to interpret it yourselves. I should point out that each item refers to a single family. All the statements were made orally in the classroom. The students were from 17 to 20 years old.

Our rules of daily life:

- We always eat lunch and dinner together.
- No TV during meals.
- Chores are done according to a rigorous schedule.
- Absolute cleanliness at the table. We don't eat unless we're suitably dressed, out of respect for others.
- My father says grace before dinner.
- We have to be polite to one another and speak properly.
- We have to let the others know if we're going to be away.
- We give money to the poor.
- We help one another to finish work together.
- Our house has to be always clean.
- After getting my first driver's license, I had to be in before 1 a.m. for the first three months.
- My parents are devoutly religious, and this is obvious every day of the week.
- We take time to eat. My parents ask me serious questions at the table. And it works both ways.
- At 10 p.m., we all watch the TV news together.
- The whole family goes to farm trophy presentations.
- We eat porridge every day.
- We always sit at the same place at the table.

Our weekly rituals

- We go to Mass every Sunday.
- Mass is compulsory until you're 16.
- During peak periods of work, someone represents the family at church on Sunday.

- No work is done on the farm on Sunday.
- Every Sunday noon, we have a special family meal.
- We visit my grandfather in the hospital every Sunday afternoon.
- We hold a planning meeting with employees once a week.
- Sunday evening, the TV is turned off and we play games together.
- Housecleaning is done every Saturday.
- During the summer, late Friday afternoons, the beer comes out and we drink with my father.

Our monthly rituals:

- Once a month, we have to visit our grandparents.
- Once a month, we have to visit my grandfather's home.
- Car payments are made on the third Thursday of every month.

Our annual rituals:

- The whole family goes along to cut the Christmas tree.
- Paternal blessing on New Year's Day.
- Every year we celebrate the date of our arrival in Quebec.
- Two-day family reunion every summer.
- Cutting firewood and sugaring off are family projects.
- A family dinner at Easter in the sugar shack.
- We fast on Good Friday.
- We celebrate our birthdays.

This list makes us realize that daily life on a farm consists of numerous details that escape official statements about agriculture and often represent the main reasons for a life in agriculture. These details constitute the basis of a high-quality human life. One need scarcely be rich, for example, to start being polite, or to appreciate the people who live with us, or to clear up misunderstandings.

An exercise: observing our family's life on the farm

To be even more concrete, I will ask a few questions that you can raise later with members of your families.

- What family rules are most characteristic of our daily, weekly, and yearly lives?
- What family traditions do we value the most?
- What are the main rituals we observe for special occasions that recur regularly?
- What material objects do we value the most in our house, and why?

- What do we talk about at the dinner table? Are they the same conversations as in the stable?
- What condition are our family albums in? Where are they kept? Are they messy or neat?
- What's the most important place in our home? And why?
- Do we have a family heritage and how important do we consider it?
- Do we spend free time with one another? Time for simply chatting, i.e., free conversations that are not "financially profitable"? Have we had such a conversation today? In other words, does our family have time for the human heart, for confidences, reconciliations, clearing up misunderstandings?
- Alongside our accounting ledgers, do we keep a diary that chronicles the daily highlights of all our lives? For one can never predict the importance of such a diary five, ten, or fifteen years from now. The part of real life that cannot be reduced to figures should be recorded somewhere...for future generations, but primarily for those who keep the diary. Because the history of the unique lives of our families or ourselves will have a chance to become more conscious if somewhere we can find echos of it.

A sense of organization and managing daily life

All these questions, you may have noted, call into question our sense of organization. This sense of organization relates directly to that aspect of general management "that escapes figures," as Mintzberg might say. One student said the same thing in different words: "A farm where people don't talk isn't a good place to live." Without knowing it, he was recalling the basic foundation of human dignity: the capacity to speak and the need to communicate our inner world. Without fully knowing it, he had also identified the ultimate foundation of the quality of life: the talking that makes it possible for human beings to share their inner worlds.

For example, how much stress caused by financial problems has vanished the instant a spouse, a son, or a daughter dared open their mouths to say something simple, such as "Don't worry about it. I'll be beside you every step of the way." The financial problem still exists, but human life has regained its dignity...

We all know farmers' families that don't ask the government to guarantee the quality of their lives. That is because they have found the source of it, in other words, the place inside each human being where visions of farm operations are developed and shared. With figures and with words.

Of course, on these farms, people sometimes take trips, not to forget about the daily routine, but to renew their minds, hearts, and bodies with new experiences.

It also happens that we make brilliant political moves with others, because politics is an inevitable and essential sphere of all life in society.

And it happens that we spend long hours talking about figures, balance sheets, planning, and investments with consultants, because we are realistic and know we are involved in a world economy.

Yet above all, we never forget that the quality of life we desire always coincides with the one we create every day, for the present is the only time over which we have any control.

By way of conclusion

In concluding, I would like to pay tribute to the day going by, to today, which is the very basis of our farming future. If planning the future has prevented us from enjoying a degree of inner peace or growing family harmony today, it means that something more essential than the survival of a farm has been overlooked: I mean the survival, today, of the human beings themselves.

The conference we are opening this evening represents an opportunity we are giving ourselves to think about the numerous facets of managing our lives in agriculture, an opportunity we are giving ourselves to understand a little better what it means to live like human beings in agriculture, even if the language of management, particularly in industrialized countries, is modelled on the language of war -- the agri-food war.

Finally, I would like to read a brief poem written by the son of a farmer who, as a student, tried to tell us how he saw his present, past, and future in agriculture.

Hymn to the Universe

Looking at the furrows in the land
The thought came to me
That this is where I was born

This land, so precious and loved so much,
Is what I work all year long

It makes me laugh and sometimes even weep,
And when I think about it, I'm happy to be a farmer

I cultivate it, make it produce
And, with the sweat of my brow
It helps me fulfil myself

At sowing time, I plant it with seeds
At harvest time, I gather its fruits

It is while working this land
With its structure so varied
That the thought sometimes comes to me:
One day, this is where I will die

Werner Shur, student
ITA de St-Hyacinthe
January 1986

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**The Organized Marketing
of Farm Products:
The Situation of the Pork Sector in Quebec**

by Daniel-M. GOUIN¹

The organizers of today's conference have asked me to talk about a special aspect of marketing farm products, namely the steps in establishing a sales agency. I shall begin by first describing the objectives pursued in organizing agricultural markets along with the means and tools available to achieve those goals.

Secondly, I shall explain the mechanism for establishing a joint plan, using the Quebec Farm Products Marketing Act as a reference. The scope of the potential power made possible by the joint marketing plan will be examined, as well its implications for the various parties involved: producers, farm product purchasers/processors, and consumers. This section of my presentation will conclude with a brief review of the economic limitations of a provincial marketing agency.

1. Professor in the Department of Farm Management at Laval University in Quebec.

The last part of this lecture will be a study of the establishment of a sales agency in Quebec's pork sector. I know very well that this sector of production is not particularly important in New Brunswick. It ranks fifth, if I am not mistaken, in terms of cash receipts, whereas it ranks second in Quebec. Nonetheless, there is an interesting analogy between the Quebec pork sector and New Brunswick's main agricultural production: the presence of vertical integration to a significant degree has a direct impact on the ways of organizing the marketing of farm products.

1. Objectives in Market Organization

a) MARKET POWER

What a group of producers or agricultural organization is basically trying to do through market intervention is to influence the market and its results for the benefit of its members, particularly in terms of the price they get. The literature calls this influence on the market "market power" (Kohls and Uhl 1980).

The concept can be made clearer through the use of a few examples, which abound in the agri-food sector:

- Food manufacturers who advertise to convince consumers that their products are different from their competitors' are trying to exercise market power over consumers in order to eventually sell their products at a higher price.
- The feed-mill operators who sign contracts with numerous producers (vertical integration) in the pork sector are trying to acquire market power. Slaughterhouses are prepared to pay a premium on market prices to guarantee the availability of a sufficient, steady slaughter volume.

- Potato producers who have only one major outlet for their production, such as a processor who practices vertical integration, are in a position to appreciate where the market power really lies.
- Producers forced to sell their livestock at a local auction because of the prohibitive cost of shipping the animals separately to another market are often in a position to appreciate the market power of the two or three purchasers who pretend to compete with each other on the local market.

Nonetheless, market power is intangible, and often the premiums or other advantages procured cannot be measured accurately or officially, and certainly not displayed publicly.

b) THE OBJECTIVES OF ORGANIZING MARKETS COLLECTIVELY

This situation has encouraged farm producers to respond collectively in order to increase their market power vis-à-vis all the other economic agents. The objectives pursued by producers through this type of action are the following:

- a) obtain the maximum revenue from the sale of a given volume of production;
- b) stabilize product selling prices and consequently revenue;
- c) obtain fair prices for all producers;
- d) obtain "adequate" remuneration for the resources involved in the production process. "Adequate" may have many meanings for producers: at the very least, it means a product price that reflects real market conditions and, at best, a price that covers average production costs.

Now let us look at how farm producers can collectively acquire some degree of market power to achieve their objectives.

2. Tools of Intervention

a) CO-OPS

To deal with the basic problem they faced, namely the imbalance in the power struggle between the farm production and food processing sectors, since the turn of the century, Canadian and Quebec farmers have organized cooperatives to market their products. The primary objective of the co-op was to get the best prices for farm products and to benefit from the greater value added to basic farm products through processing activities.

Farm co-ops are undeniably a key factor in the economic development of the agri-food sector, particularly in Quebec. They have very likely made it possible to reduce the costs of marketing farm products for the benefit of producers. Yet because of their very nature, they remain economically limited instruments. In fact, the voluntary nature of membership in the movement makes it impossible for a co-op to fully control the marketing of a farm product.

b) PRIVATE INITIATIVES

- Voluntary companies: a few experiments along these lines are now under way in Quebec, with more or less success, depending upon the sector. In reality, this simply means the consolidation of producers become shareholders in a company incorporated to handle certain marketing operations. The major limitation of this type of company is very obvious: as with co-ops, the voluntary nature of membership, and therefore the impossibility of regulating or controlling the marketing of the total volume of production, which clearly reduces its members' bargaining power with the other parties.

- Vertical integration: through the control over large production volumes it provides, vertical integration gives those who practice it some market power. This market power, however, obviously does not benefit the integrator and the integrated to the same degree. Vertical integration therefore does not represent a collective marketing organization, nor are the profits shared collectively.

c) THE JOINT PLAN FOR MARKETING FARM PRODUCTS AND THE COMPULSORY SALES AGENCY

This is the most refined type of collective organization for marketing farm products. We shall now look at the steps involved in developing a joint plan and the powers it can offer.

3. The Steps in Organizing a Compulsory Sales Agency

a) THE JOINT PLAN

Definition: an organizational plan for producers, sanctioned by the Farm Products Marketing Act, whose purpose is to handle specific marketing activities. The joint plan is compulsory, horizontally integrated, and controlled by producers.

- compulsory: once a joint plan is approved, it binds ALL producers of the product in the territory covered by the plan.

- horizontally integrated: (as against vertically integrated) it binds all producers operating at the same level and engaged in the same production activities.

- controlled by producers: the General Meeting of producers may replace the agency in charge of implementing the joint plan, replace the bargaining or sales agency, and change the powers, duties, and nature of the joint plan. The General Meeting also establishes the by-laws (contributions, co-op advertising costs, etc.) for internal management.

Legal structure: the establishment, powers and duration of joint plans depend on a government agency (the Régie des marchés agricoles du Québec - RMA) which always reserves the right to supervise or check the operation of a joint plan. The RMA approves joint plans and settles disputes between the parties bound by such a plan. It should be noted that the RMA cannot establish a joint plan. Joint plans always have a grassroots origin, i.e., they originate with active producers of a specific product.

System for Establishing a Joint Plan:

- An application to establish a joint plan must be sent to the RMA by 10 interested producers or by an association of such producers.
- The draft plan must indicate, among other things, the farm product considered and the territory covered, the agency in charge of administering it, the bargaining or sales agent(s), and the duties, powers, and obligations that the plan will give producers.
- Once the draft joint plan has been approved (as is or amended) by the RMA, following public hearings for everyone with an interest in the marketing of the product in question, a referendum on the draft joint plan is held for the producers. The list of eligible producers is drawn up by the RMA.
- For a joint plan to come into force, at least half the producers must vote and two thirds of the votes must be for the plan.
- In exceptional cases, a joint plan may be approved without a referendum by a Cabinet decision.

Powers of a joint plan: a joint plan may have numerous powers. I shall divide them into five categories graduating from minimum to maximum market intervention:

Category 1: set up generic advertising campaigns for the product; set up an applied research fund.

Category 2: rule on product handling and shipping conditions (shipping rate negotiations); rule on production conditions (standard integration contract).

Category 3: negotiate prices and sales terms and force purchasers to comply (product classification standards); set prices.

Category 4: establish common marketing and a price equalization system for paying producers.

Category 5: restrict production and issue quota regulations to do so (impose penalties); negotiate and participate in national agreements.

This list is not exhaustive, and we should be sure to add here power of financing all these operations through obligatory deductions at source.

b) THE IMPLICATIONS OF ESTABLISHING A JOINT PLAN FOR THE PARTIES INVOLVED

Producers: A joint plan is obviously a marketing organization that imposes constraints on them. Even those who abstained from voting or who voted against the adoption of a joint plan have to comply with it once it has been approved. The real power of a joint plan in fact lies in its binding nature by allowing producers to consolidate in a collective organization that negotiates marketing conditions on their behalf.

Purchasers: In this case, we cannot talk about parties directly involved in administering a joint plan. It would be more accurate to regard the purchasers of farm products, whether co-ops or private industries, as being subject to the joint marketing plan. In fact, the Act forces them to negotiate:

...every person engaged in the marketing of a marketed product must negotiate with the producers' board...to fix the sales price...and any other terms and conditions for marketing the marketing product.

If a party refuses to negotiate, the Régie may make an order and thereby impose conditions for marketing the product in question. Moreover, purchasers are required to deduct the contributions payable by producers at source and forward them to the producers' board in charge of implementing the joint plan.

Finally, any association of purchasers, carriers, or other parties may ask the Régie for accreditation as the sole representative of the parties interested in marketing the product in question. All purchasers, even those who do not belong to the association concerned, are then bound by the negotiations conducted by the accredited agency acting on their behalf.

Consumers: They are not party to the joint plan. Nonetheless, they can state their views at the RMA's public hearings.

c) THE ECONOMIC LIMITATIONS OF A PROVINCIAL MARKETING AGENCY

Even though sales terms and control of distribution are negotiated, the power to influence price levels and stability is relatively limited if the marketing agency operates only on a provincial basis. In fact, agencies operating solely at the provincial level have to protect their own market and ask prices for their primary products that allow intermediaries to remain competitive on the national market (or international in the case of an exported product).

In reality, this does not mean that a provincial marketing agency is useless. But it must be understood that such an agency has limited power to act, and in particular, it cannot guarantee its members that they will obtain an average producer price that corresponds with the average production cost. On the other hand, a provincial joint plan can assure its members of obtaining a price for their product that represents the best they can get under prevailing market conditions of supply and demand.

We shall come back to this question a little later when we look at the situation in the pork sector. What is important to understand at this stage is that the only way of obtaining an average producer price that corresponds with the average production cost is to limit the total supply of a product available on the market by restricting production and controlling imports. Under the Canadian constitution, the provinces lack sufficient power to do this: decisions regarding restrictions on interprovincial and international trade are within federal jurisdiction. On the other hand, the federal government cannot impose production limits on individual producers, since the primary level of production is within provincial jurisdiction.

This is why it is necessary to establish a national marketing board with an appropriate legislative framework at the federal level as well as in each province concerned. Once the structure has been obtained, a national marketing plan, such as those in the dairy and poultry sectors, can be established if each province joins voluntarily.

4. A Study of the Organization of Pork Marketing in Quebec

It was a long, hard road, to say the least, to get a compulsory pork sales agency to operate in Quebec. It involved two major stages: first, the joint plan was adopted by producers only 11 years after the initial attempt, and then, only after all sorts of incidents and dead ends; secondly, putting the sales agency into operation took another eight years. So in all, some 20 years went by between the first attempt to get Quebec pork producers to adopt a joint plan in 1970 and the day the collective sales agency first went into operation in 1989.

a) THE JOINT PLAN

The first attempt to introduce a joint plan for pork production ended with too few votes to meet the minimum standard stipulated in the Marketing Act. For, as mentioned above, at least half the producers must vote and two thirds of the votes must be in favor of the joint plan for it to pass. In 1970, 58% of the producers took advantage of their right to vote, and while a majority, or 56.3%, was in favor of the draft joint plan, it was legally too small. At the time, Quebec pork production was still in its infancy, producing 1.7 million slaughter hogs per year. Almost 15,000 farms then had hogs (all categories). (Lebeau et al. 1990)

In the end, mobilizing such a large number proved to be difficult, all the more because many of them who still had relatively diversified farms could not see the joint plan as necessary and essential.

In 1974, there was a second referendum on a draft joint plan. Once again, while 65% of the producers voted and a clear majority (61.7%) wanted the plan, this still fell short of the legal two-thirds minimum. At the time, Quebec pork production was rapidly growing, stimulated by the vigorous efforts of the feed-mill operators practising vertical integration. Thus Quebec hog slaughters exceeded 2.2 million head. This expansion in the sector probably accounts to a large extent for the rejection, or rather the nonacceptance, of the joint plan. In fact, we find that, in general, the joint plan has a logical tendency to attract enough support when the market is saturated by an oversupply, and not when it is rapidly growing and prices are on the whole relatively attractive. (Morisset 1982, p.425)

With production expanding and the farm union movement trying to organize a joint plan, the integration-minded mill operators did not idly stand by. They got organized within the Office des producteurs de porcs du Québec (OPPQ). These operators definitely had some market power from the volumes they controlled. They feared, perhaps with good reason, losing their market power and seeing a change of the power they had over "their" integrated producers.

Therefore their group strongly advocated the principle of individual free enterprise to oppose in every possible way the establishment of a joint plan. In fact, cynically speaking, one might say that the integrated producers were free to bow to the conditions of integration with no real possibility for negotiation, and the independent producers who controlled a relatively small volume were free to have a price for their livestock, imposed on them, once again without any chance to negotiate. In the final analysis, it meant producers were free to choose the fate that was in store for them.

Faced with this organized opposition and the two setbacks in the earlier referendums, pork producers convinced Cabinet to make use of its measure of exception under the Act and order a joint plan without a referendum. Thus the Quebec pork producers' joint plan was realized in late 1977, but it should be understood that this happened only because there was a clearly demonstrated political will to move in that direction.

Yet it was another setback. The integrators associated with the slaughterhouses quickly proved, so to speak, that the joint plan did not carry enough powers and was therefore inoperative. That joint plan was therefore abolished as early as 1978. This episode is interesting, since it clearly shows that, despite all the coercive powers the Marketing Act confers on a joint plan, systematic opposition can succeed in curbing the negotiating process called for by the plan, as well as collection of the deductions required for the plan to function. Therefore a minimum of dialogue between the parties involved, especially between product purchasers and farm unions, appears to be appropriate for a joint plan to function effectively.

The farm unions proved their defeat was not final, and in 1979, once again steps were taken to have producers vote on a draft joint plan. The entire organization of the Union des producteurs agricoles (UPA) threw its weight behind the campaign to obtain a vote favorable to the joint plan.

OPPQ opposition was systematic. Drawing up the list of producers eligible to vote was no painless task. The integrators tried for a vote by mail, whereas the union demanded and got a vote at polling stations. A vote by mail might have allowed the mill operators to exercise some power over the vote of the integrated producers. And worse yet, a few days before the official vote, the OPPQ sent all producers a mail-in ballot to spread confusion by misleading them into thinking it was the official one. (Morisset 1982, p. 433)

But nothing came of all these manoeuvres, and so the joint plan was finally approved in March 1981. At that point, the sector was going through especially hard times and bankruptcies were common. Though it may seem paradoxical, this made the climate conducive to the establishment of a joint plan which, in those circumstances, could represent the hope of at least a partial solution to the problems faced by producers.

Yet the powers of the joint plan were limited to the first three categories I described above. In fact, to exercise the collective powers over sales and or restricting production, authorization is required from a duly convened Special Meeting.

The other powers that could be exercised by the joint plan were actually relatively limited. First, energy focused on negotiating with slaughterhouses the conditions for automatic deductions at source of producer contributions. It is one thing to adopt a joint plan; being able to finance its activities is another. Only when funding for the joint plan was ensured could other activities be launched, and in particular promotional campaigns, such as generic advertising for pork.

b) THE SALES AGENCY

Establishment:

Now if the objective of arriving at a real marketing organization through the collective sales mechanism occurs in stages, adoption of the joint plan is obviously the first step. In time, the mistrust that many of the parties and even certain producers had about the joint plan formula gradually dissipated.

Moreover, the compulsory funding made possible by the joint plan gave the Fédération des producteurs de porcs the means to organize and conduct consultations and negotiations to propose a collective marketing formula acceptable to the vast majority of producers. But product purchasers, namely the slaughterhouses whose cooperation was essential to operating a centralized sales agency, also had to accept the formula.

Thus, the principle of establishing a collective marketing mechanism was accepted by the General Meeting of producers in March 1987, and two years later, after numerous consultations and negotiations, the first electronic auction was held in March 1989.

It is interesting to note that, in comparison with the situation during the days of the first steps towards introducing a joint plan in 1970, Quebec is today producing twice as many hogs with just over one quarter of the farms, or slightly over 4,000 compared to 15,000. (Lebeau 1989, p. 35) Such concentration of the sector in larger and more specialized operations probably led producers to adopt the collective marketing formula. From the moment pork production becomes a producer's main source of income, there is a keener interest in getting a price that reflects real market conditions as accurately as possible.

The electronic auction was therefore introduced, with the following objectives (FFPQ 1990, p. 27):

- better balance of power in setting prices
- savings in marketing operations:
 - rationalization of transportation
 - planning of slaughterhouse supplies
 - centralized pay department
- steady supplies
- fixing of a fair price
- standard marketing conditions
 - payment terms
 - compliance with grading
 - compulsory inspection
 - guaranteed payment for all

Operations

Without going into the details of how the electronic auction system works, let us look at its main features:

- all sales of slaughter hogs must be by auction; this even applies to a business whose vertical integration includes slaughtering.
- the auction operates on a daily basis; producers make their offers through the Federation. The slaughterhouses are directly connected to the auction through a terminal and sales are made by downward bidding.
- producers are paid on the basis of graded carcasses at a weekly pool price. Transportation to the slaughterhouse is their responsibility and at their expense, for which they receive a transportation subsidy of \$4.00 per hog.
- administrative charges are \$0.35 per marketed hog.

Results:

To fully appreciate the impact on the market of introducing an electronic auction, we have to take a brief look at the how prices were previously set in the local Quebec market.

Generally speaking, in Quebec, the price set by the Ontario market price reflected the North American market. The base price in Quebec was quite simply the Ontario price less a differential of about \$4.00 to \$4.50. Besides this base price, most producers could collect a premium base on their market power. This variable premium generally depended on the production volume controlled by the seller. It might take the form a fixed amount per hog, commonly called the transportation subsidy, or changing the class of hogs to an index of 100 from a lower index at slaughter, or some other financial benefit. Obviously, it is difficult

to determine precisely the amount of these various premiums, but it is generally agreed that the \$4 transportation subsidy paid in the electronic auction comes close to the average of what the slaughterhouses used to pay.

Consequently, it is possible to establish a comparison of average prices paid before and after introduction of the electronic auction by using Ontario and American prices as references. The following graphs show prices in the various markets in 1988 and 1989.

Graph 1:

Price of Pork, 1988 - Quebec, Ontario, United States

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Quebec

Ontario

United States

Source: Fédération des producteurs de porcs du Québec.

Graph 2:

Price of Pork, 1989 - Quebec, Ontario, United States

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Quebec

Ontario

United States

Source: Fédération des producteurs de porcs du Québec.

A simple glance at these graphs reveals that the price differential between Quebec and the Ontario and United States markets shrank after March 1989, that is, once the electronic auction began operating. This result is even more apparent in Graphs 3 and 4, where we see in fact that the difference in pork prices between Quebec and Ontario narrowed after the electronic auction was introduced. Whereas from March to December 1988 the Quebec price was on the average \$4.29/100 kg lower than the Ontario price, this variance was reduced to \$2.32/100 kg on the average from March to December 1989.

As for the price differential between Quebec and the United States, while highly volatile from one month to the next, it was also significantly reduced on the average, dropping from \$12.41/100 kg in 1988 to \$9.70/100 kg in 1989, again for the period from March to December.

Introduction of the electronic auction therefore had a visible effect on improving pork prices in Quebec in 1989, and this, it should be noted, despite the countervailing duty imposed by the Americans on pork cuts since mid-year.

Graph 3:

Quebec-Ontario Pork Price Variance, 1988 and 1989

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Que.-Ont. '88						Que.-Ont. '89			(89 = -2.32)		
									(88 = -4.29)		

Source: Fédération des producteurs de porcs du Québec.

Graph 4:

Quebec-United States Pork Price Variance, 1988 and 1989

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Que.-U.S. '88						Que.-U.S. '89			(89 = -9.07)		
									(88 = -12.41)		

Source: Fédération des producteurs de porcs du Québec.

This form of collective marketing seemed therefore to benefit Quebec pork producers, at least in its first year of operation. Clearly, the objective of a better balance in negotiating powers had been attained. One must nonetheless wonder about the market's ability to absorb this price increase in the medium and long terms. Actually, who absorbs market price increases? Consumers? Certainly not. The reference prices have not changed, and the price that American or Canadian consumers pay does not increase because Quebec producers are paid more for pork. The market is North American, and price conditions are not limited to the Quebec market.

Consequently, if prices have increased, it is because Quebec slaughterhouses are competing more to buy hogs and thus using their processing facilities at full capacity. Yet there must certainly be limits to this overbidding, and the fact that the price differential between Quebec and Ontario has still not stabilized since the introduction of the electronic market clearly shows that the market and those participating in it are trying to find a new balance. Moreover, sales prices in the first months of 1990 are clearly less favorable, which means it is still too early for a complete evaluation of this method of collective marketing that Quebec pork producers have adopted.

5. Conclusion

The purpose of my presentation was to describe how farm producers can organize collective marketing for their products. We have seen the regulatory framework permitting this type of marketing organization, and we illustrated it by presenting the situation of pork production in Quebec. In conclusion, I would like to broach a final question that today's organizers put to me, namely the possibility of establishing a national pork marketing board.

The question can be answered only by examining the reason for a national board.

If it is a matter of establishing the structures to collect the funds necessary for advertising campaigns or research programs on a national scale, yes, it is probably possible if the producers and the provinces clearly want one.

If it is to organize collective marketing beyond each province's market, for example, to set up a centralized electronic auction for Eastern Canada and another for the West, once again, it is probably possible if the will is there.

Yet it is legitimate to doubt that will is really there right now, since recently a timid attempt to study the possibility of establishing a national board was quickly dropped. The only objective of such a board would have been to manage a collective fund financed by producers from across the country to pay the countervailing duty imposed by the Americans on imports from Canada.

Finally, as for the possibility of establishing a supply management system in this sector, two major problems must be considered:

- the current context of the GATT negotiations, the easing of restrictions on trade, and deregulation of the economy is certainly not favorable to establishing new marketing boards with the power to manage supply;

- but even more important, what is the logic of introducing supply management into a sector that is a heavy exporter in Canada and subject to the price conditions of a market much larger than its territory, namely the North American market? This raises another question: What is the purpose of supply management? Generally, to improve prices so that the market alone can ensure producers of adequate receipts to cover a large part of their production costs. In other words, with supply management, there is no need for other price or income stabilization programs (OSPA, tripartite, ASRA in Quebec), for the market, and therefore the consumer, pays what it takes to pay producers directly through the price of the product, thereby eliminating the need for taxpayer assistance.

Yet, in the case of exported production, there is no way to convince American consumers to pay the fair price for the product. Increasing our domestic price in relation to the reference market would simply mean giving up delivery to that market and therefore cutting our exports and reducing the pork sector to satisfy only domestic market needs. The implications of that are major, since some 25% of Canadian pork production is exported annually.

Naturally, one can imagine a double-price system: higher on the domestic market by restricting and regulating supply, and subject to export market conditions for the rest. The question then will be: Who will finance the exports? But, once again, such a policy would very likely be a violation of current GATT rules, and that would mean the closing of our export markets. That is exactly what our neighbors to the south would like, since they are already doing all they can to close their market to Canadian pork production.

Consequently, the possibility of establishing a national pork marketing board in Canada during the next few years seems very slim. One could probably apply this comment to all farm production without much fear of being wrong.

As for the existing national boards, their future hinges closely on what international trade policy the Canadian government decides to apply and can sustain in the years ahead under the growing pressure to open markets.

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MAKE IT '90

**Agriculture and Technological Change
From Yesterday to Tomorrow**

**Presented by
Angèle St-Yves, Engineer and Agronomist**

**Farm Management Conference
Hilton International, Saint John, N.B.
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AGRICULTURE AND TECHNOLOGICAL CHANGE, FROM YESTERDAY TO TOMORROW

Thank you, Mr. Maillet.

1. Introduction

My thanks to the organizers and all you farmers for giving me this opportunity to talk to you about technology. In my case, fascination with technology led me to study agricultural engineering at university. It has now become a subject of great interest. In your case, technological conversion could suddenly change your future. You would be wise to start thinking about it right now because, in any case, it is coming fast. If sometimes certain changes make things worse rather than better, most tend toward progress on the whole.

I will begin my talk with a few words from Simone de Beauvoir, who rightfully said: "Those who do not want anything ever to change invariably shed tears over the marvellous past that is slipping away, without even a little smile for the nascent future."

From time to time, our fathers and mothers remind us that the marvellous past also had its share of discomfort and hard work. They do not always regret having swapped farm implements for the machine. Yet, does technology offer only benefits? Or does it fit into the new context of sustainable farm development?

How has technological change transformed agriculture in the 20th century? Can we predict its influence or how it will be influenced in coming decades?

Those are a few of the questions I will try to answer in my presentation.

2. Technological Change

The marvels of technology have helped change the farm world: in developed countries, during the last century, industrialized agriculture has replaced subsistence farming. In Canada, technological change in farming will continue at a dazzling pace in the next few decades. The development of world markets and the emergence of new environmental, economic, and nutritional concerns call for unequalled performance from farm operations. From now on, new technologies will become a vital support.

But just what is technological change? It was the mastery of fire, the invention of the tool and the wheel, harnessing energy derived from steam, oil, electricity, the advent of the machine and data processing, the exploration of the sea and space, etc. The comfort and well-being that characterize North American daily life in 1990 (microwave oven, telephone answering machine, central heating, trailer) result from the development of numerous technologies and an evolution in production facilities.

Technological change looks like an irreversible yet controllable process. The general public is more concerned about the impact of the new technologies on the social, cultural, and environmental values acquired with some difficulty over decades. Becoming aware of this reality means accepting its importance, and also agreeing to see to it that technology meets our own needs and those of society satisfactorily.

Could this phenomenon shake up the future of agriculture, a basic industry?

3. Farmers and Technological Change

It is a well-known fact that technological change has made it possible to supply Canadian consumers with an acceptable quantity and quality of products at highly reduced prices since after the war. But what has this meant for farmers?

3.1 Mechanization

We know that the mechanization of operations has turned the organization of farm work inside out and introduced mechanical, chemical, and genetic production aids to ensure growth. The chores usually done by women and children -- hoeing, planting, weeding, manual milking etc. -- were the first affected. These techniques lightened the burden of work and were rightfully much appreciated. Yet at the same time, people were losing the experience they had acquired and were relegated to the more subsidiary activities of farm operations, deserving less recognition and offering less self-actualization, in particular, replacement work. On the other hand, the use of chemical substitutes was becoming more and more intensive. At the same time, some producers decided to expand their operations and/or specialize, while others gave up.

3.2 Automation

Automation is improving the well-being of workers even more by eliminating tedious tasks and reducing work hours. An operation's productivity and profitability are maximized. Moreover, human errors are eliminated. But beware! The job you do may also be swept away, and with it will go more of the experience you have acquired. Automation thrives on production specialization, intensification, and concentration, and introduces all kinds of more rigorous controls into the operation.

We know that in United States, 20 percent of the farmers produce 80 percent of the farm commodities. At present, there are less than 500,000 farm producers. If, for example, such a trend were to become established in Quebec, the number of farmers would be reduced by more than half to some 17,500 producers.

Prudence requires farsightedness in this approach in order to keep our farmers in business and take care of those who will leave agriculture.

3.3 Experience

Farmers' wives hesitated before openly softening their attitude toward machinery. Nonetheless, often out of inclination, necessity (replacement), or training, farm women have acquired considerable technical knowledge about various facets of production. Chores such as milking, feeding livestock, harvesting, preserving etc., are part of many people's daily lives. Farm women do not always get credit for this technical knowledge, often acquired from doing farm work, or get recognition only when their husbands are absent. Our mothers knew how to run the farm when our fathers were away. But once they returned, our

mothers faded into the background and went back to their inferior chores. Some people even go so far as to say that science and technology are not a woman's prerogative. This prejudice will have to be refuted! And this won't be done by standing on the sidelines.

3.3 Sustainable Farm Development

In 1987, a world commission on the environment and development published a report entitled Our Common Future. It concluded that the future depends upon our ability to achieve economic development oriented towards resource conservation. In agriculture, the challenge is rational management of our resources and our environment in order to optimize the economic and social benefits related to providing society with a regular supply of healthy, nutritional food, without mortgaging the inheritance to be passed on to the next generation. And, many people are insisting on greater welfare for animals.

This new way of looking at the agri-food industry assumes changes in attitudes, habits, and behavior that the new technologies will have to take into account.

This more complex type of development calls first of all for dynamic, well-trained human resources ensured of a viable future. Also related to this is the protection not only of farmland, but also of the soil to be cultivated and the water it needs. An adaptation of modern production techniques to this change in direction is essential. The globalization of markets and humane treatment of farm animals should reinforce this new approach.

3.4 The Means

In response to technological advancement, farmers will have to watch for problems and remain able to use the new tools offered by science and progress cheerfully. Technological conversion must not mean that men and women are definitely giving up farm work or that they are being turned into simple button-pushers. Quite the contrary. Aware of the changes ahead, farmers must take full measurements of current technological changes and understand the urgency of taking action where necessary.

You must therefore acquire the means to fully master the technical knowledge needed to make decisions about integrating and using new technologies in your operations, be they large or small. In so doing, you will succeed in:

- preventing stagnation (disappearance of activity)
- respecting the quality of life, ecology, the environment
- protecting the heritage to be passed on
- protecting family relations
- controlling debt
- etc.

Let us see how the technologies can be controlled.

First of all, you must locate your operation in the context of the agri-food chain. Then, you must understand the how and why of the new technologies, and see where they fit in if you need them. Finally, you must be able to dissect every stage of production at your farm, see who is in charge of it and consider who (or what) will be affected or helped by the technology, and how.

In this way, you will recognize the limits of technology, and the underlying or restricting safety factors. You might even orient your research toward the development or adaptation of technologies.

4. The Agri-food Chain and the Farm Operation

The agro-food chain is a simple concept. It is necessary to realize that human and natural resources are the foundation of agri-food activity. Next, the productions from these resources must be adapted and of a suitable quality to meet the demands of efficient processing of products and highly diversified markets, as shown in Figure 1.

Resources

Productions

Processing

Markets

Figure 1: The Agri-food Chain

You must then think about where your operations fit into this sequence, study the effect of the links on the chain link selected, and understand its impact on the others. For example, dairy production is influenced by market demand. The market requires the original product to undergo various processes. Moreover, you must examine the impact of this production on resource conservation (soil, water, energy, etc.), and on the availability of farm labor.

This basic procedure clarifies potential directions in the development of agriculture.

5. The Agri-food Chain and the New Technologies

How will the new technologies become integrated into this process?

They will obviously revolve around four axes: resources, productions, processing, and markets.

5.1 Resources

Human resources remain the key factor in farm development. They must be well trained, competent, and dynamic. Technology must serve them, and not the other way round. Human beings must retain their humanity. Soil, water, and energy resources will have to be exploited rationally in order to protect the environment and farm heritage for future generations. The new operating techniques will take these requirements into consideration. They will counteract the degradation of our soil and water (washout and wind erosion, soil subsidence, loss of organic matter, acidification, contamination) and become great energy savers and support the rational use of mineral fertilizers and pesticides. They will back recycling efforts and residue conditioning. Better knowledge of the climate and the development of climate-related behavior models will lead to unequalled control over production in terms of both growth and predator control...

5.2 Production

Production will benefit tremendously from developments in genetics and animal and plant growth control, and livestock will be treated humanely. The advent of growth regulators, embryo transfers, integrated pest control, attention to all soil components, the development of nitrogen-fixing plants, supplementary crop systems, and the emergence of new, hardier varieties better adapted to the Canadian climate are examples of this progress. The ecological approach is having a positive impact on farm production.

The development of high-performance equipment continues. Various operations involved in breeding, feeding, milking, ventilation, cleaning etc., are being automated. The same applies to the automation of greenhouse management, fruit harvesting, and irrigation. Remote-control tractors and tillage equipment, as well as robots on the farm will be ours in the near future. Some people even dream about farming in space.

5.3 Processing

Traditional preservation techniques include sterilization, drying, salting, cooling, and freezing. A certain number of innovations have already appeared, such as aseptic packing and the use of cryogenic fluids. Furthermore, advanced techniques in gas-storage and irradiation techniques have made rapid strides in the last few years.

Biotechnologies will lead to a new range of procedures based on fermentation and enzymatic potential, in addition to the already existing procedures of fractioning, concentration, and texturing. The

nutritional value of foods and improvement in the general wholesomeness of farm products are major concerns in the development of technology in these fields. Food will have to be free of any waste, pesticides, hormones, or preservatives, in response to consumer demand. Even packaging will have to be better adapted to these new conditions as well as to environmental protection.

In addition, reliable, flexible, and economical techniques will have to be applied in shipping and storage systems, from the harvesting site to the consumer's table. We must not lose sight of these factors.

5.4 Markets

The confirmation of more clearly defined nutritional and environmental concerns and very competitive national and international markets will force the development of highly sophisticated technologies for economic and technical management. The product must meet the demands of consumers, whose habits are currently changing. The elderly have nutritional needs very different from those in the 30-40 age group. Young people, on the other hand, prefer ready-to-eat food they can wolf down. We know that population percentages are rapidly changing: the number of seniors is increasing, and the number of young people is shrinking. Exports also have their share of requirements and restrictions that must be taken into consideration, because they have repercussions on the other production chains.

It is the funnel through which all production must pass.

We see that the successful technological approach must be comprehensive and integrated, and that it is complex.

5.5 Computerization

Computerization allows more immediate and rational management of these highly complex processes, even on a reduced scale. Farm microcomputer systems will develop, rain or shine. This new integrating technical tool could revolutionize farm management entirely, and is limited only by the software it uses and the operator who activates it.

We must not be afraid of using it, but rather learn how. It's a big pencil that writes fast. But a computer cannot be used at full capacity unless the operator knows what work has to be done, or even better, what problem must be solved. Computers do not know how to do that yet.

In addition to accounting, microcomputers can calculate feed rations or amounts of organic or inorganic fertilizers, provide a review of the fields, or monitor productions. All kinds of information can be stored and processed. The data can relate to vegetable production, livestock production, crop rotation, agricultural chemistry, yields, transportation, machinery, repairs, maintenance, sales, market conditions, etc.

Best of all, this information can be accessed at any time. Communication can be established outside the farm, and reports on activities, even technical can be produced instantly. The operation is seen more as a comprehensive, integrated system, from the technical, the economic, the environmental, and the nutritional standpoint. Much software is being developed along these lines. For example, the management of animal waste, in an assessment of the situation, takes into account livestock feed, livestock buildings, manure storage and spreading.

Managing such a technical data base develops to some extent a key person aware of everything happening in the operation -- a person who can have an overall view of the operation and a knowledge of the details. He or she can do the operations or make the desired corrections at the appropriate time. And the drastic change, in comparison with the introduction of mechanization and automation, is that women and young farm operators are less reluctant to start using computers than they were to adopt other technologies.

Computers force us to catalogue every production-related activity. Such an exercise may reveal chores we now forget to include and therefore to give them a value. Also, the effects that certain activities have on others in the system also becomes apparent. But be careful! Computers work logically. If we forget to tell them something or to do something, they go haywire. A computer is a good master but it can behave like an idiot.

6. Farmers and Technical Training

Recent studies indicate that farmers, including a growing number of women, are interested in acquiring the knowledge considered essential for the smooth operation of their businesses. Recognition of technical knowledge previously acquired or obtaining technical training is part of the equipment.

Modern agriculture is gradually forgetting about physical effort and calling more for higher education. A growing number of American farmers already have university degrees or training in advanced technology -- relatively speaking, five times as many as in Canada. Young people are well aware that men and women must join the movement and meet the new challenge. Consequently, the need to become familiar with technological change in the context of sustainable farm development is an imperative for all. We must not be left behind, but instead

become actively involved in these fields of learning. Market globalization will lead to a strengthening and refinement of higher education in the agri-food sector, if Canada wants to remain competitive.

We must avoid the trap of limiting ourselves to learning only , for example, how the microcomputer works without being able to understand what it produces. The poor little product might not be in good shape. If technology is intimidating, we have to demand helpful, adapted learning opportunities to get to know, master, and use it properly. We have to ask questions and insist on answers.

There are many ways for farmers to hone their technical skills. First, local or regional extension officers (agronomists) provide highly relevant professional information about various types of production. They should be consulted when questions come up. Moreover, all training courses for farm operators must take learning the new technologies into account. These courses are available locally or by correspondence. Technical courses on video-cassettes, viewed in the comfort of your own livingroom, represent one solution within reach of many.

Finally, information sessions organized by farmers, special federations, etc., can serve as a springboard for the leap into a specific technology. Similarly, the media are excellent vehicles for introducing the public to some new technologies. Above all, this kind of effort helps us to adjust to technological and ecological conversion or to adapt it to the farm (family or co-op) while maintaining the quality of life of those involved and the heritage to be passed on to the next generation, with full knowledge of the facts.

7. Conclusion

For farmers, the legal and union recognition they have acquired to date has been fragile and could suffer setbacks if they refuse to become involved in the technological commitment to sustainable farm development. To be understood, we must speak the same language as our neighbors or else we have a Tower of Babel, particularly in a context of change and on a world scale.

In my opinion, the Nineties will be a decade of complex but stimulating transition. The sustainable development of farming will have to permeate our actions, which must be consumer-oriented. Consumers must share the constraints society has to adopt. From this different perspective, in other words, in the long run, factors ignored regain their importance. Production methods, the organization of production and work, and consumer demands are irrevocably destined to change. Best then to swim with the tide.

Technology has brought advances to the agri-food industry in the 20th century. The challenge in modern agriculture has been accepted enthusiastically. To approach technological conversion positively in the context of sustainable agriculture prevents blind, insidious subjugation to technique and removes the future of the agri-food industry from the service of strictly maximum productivity technology. A confident attitude on the part of everyone involved will make it possible to focus more on the application of these new techniques, such as the extension of the human activity and creativity in today's farm operations, and will guarantee an enviable heritage for the future.

To paraphrase Socrates, I think we can only live better if we try to become better, or more pleasantly if we are totally aware of our improvement. Growing familiar with technological change signifies development and improvement, in agriculture as in the other fields of science; and this applies to women as well as men.

AGRICULTURE UNDER
THE CANADA - U.S. TRADE AGREEMENT
IMPLICATIONS FOR AGRICULTURE

PRESENTED TO:
MAKE IT 90 - FARM MANAGEMENT CONFERENCE
SAINT JOHN, NEW BRUNSWICK
MARCH 12, 1990

BY

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AGRICULTURE UNDER
THE CANADA - U.S. TRADE AGREEMENT
IMPLICATIONS FOR AGRICULTURE

INTRODUCTION

GOOD AFTERNOON LADIES AND GENTLEMEN, MR. CHAIRMAN, THANK YOU FOR INVITING ME TO SPEAK TO YOU AT THIS IMPORTANT AND TIMELY MANAGEMENT CONFERENCE. MY TOPIC TODAY IS TO ADDRESS THE NEW CANADA - U.S. TRADE AGREEMENT.

YOU WILL NOTICE THAT I DID NOT REFER TO THE "FREE TRADE AGREEMENT" AS IT IS COMMONLY CALLED, SINCE IT DOES NOT ESTABLISH FREE TRADE BETWEEN THE U.S. AND CANADA. IT IS MORE IMPORTANT TO CONSIDER THE AGREEMENT IN THE CONTEXT OF THE GATT NEGOTIATIONS AND THE EVENTS OCCURRING GLOBALLY PARTICULARLY IN EUROPE AND THE PACIFIC RIM. THE AGREEMENT IS MORE OF AN ATTEMPT TO LIBERALIZE TRADE BETWEEN THE WORLD'S TWO LARGEST TRADING PARTNERS, NOT ONLY AS AN OFFENSIVE STRATEGY BUT TO ALSO CONSOLIDATE THE NORTH AMERICAN TRADING POSITION WITHIN THE GLOBAL CONTEXT.

DURING THE COURSE OF MY PRESENTATION I WOULD LIKE TO FOCUS ON TWO AREAS, NAMELY THE CUSTA ITSELF AND STRATEGIC PLANNING. WHILE I'M SURE MANY OF YOU ARE LIKELY FAMILIAR WITH THE AGREEMENT IT WOULD BE APPROPRIATE TO REVIEW THE

AGREEMENT AND ITS IMPACT ON CANADIAN AGRICULTURE. WITH REGARD TO STRATEGIC PLANNING, CANADA'S AGREEMENT WITH THE UNITED STATES CALLS INTO QUESTION EXISTING ANALYSES AND STRATEGIES, AND REQUIRES REVISIONS TO CORPORATE STRATEGIC PLANNING. IN FACT, ANSWERS TO THE QUESTIONS RAISED BY THIS AGREEMENT DO NOT LIE IN POLITICAL OR MACRO-ECONOMIC ANALYSES, BUT IN THE ANALYSIS OF THE ENVIRONMENT BY AND IN THE DIAGNOSIS OF EACH PARTICULAR COMPANY.

STRATEGIC PLANNING IS BASED ON A FACTUAL CONTEXT. BECAUSE THE AGREEMENT WILL BE PHASED IN GRADUALLY, ACCORDING TO A DEFINITE SCHEDULE, MANAGERS WILL HAVE AN OPPORTUNITY TO RETHINK ON THEIR ACTION PLAN. THUS, THE SHOCK OF FREE TRADE WILL BE LESS DRAMATIC THAN THAT WHICH CAME IN THE WAKE OF THE 1973 OIL CRISIS.

THE AGREEMENT IS IN NO WAY REVOLUTIONARY AS FAR AS ECONOMICS ARE CONCERNED; DESPITE THE DEFINITE THREATS IT POSES TO VARIOUS COMPANIES, AND TO SOME INDUSTRIES IN PARTICULAR. THE AGREEMENT MERELY AFFIRMS THE TREND TOWARD LIBERALIZED TRADE WHICH SUCCESSIVE GATT ROUNDS HAVE ENDORSED FOR FORTY YEARS. WHETHER THEY ARE FOR OR AGAINST THE TERMS OF THE CANADA - U.S. TRADE AGREEMENT, COMPANIES NO LONGER HAVE A CHOICE AND MUST THINK IN TERMS OF WORLD-WIDE TRADE.

NOW I APOLOGIZE, TO SOME EXTENT FOR THE CORPORATE JARGON; HOWEVER, FOR MANY YEARS WE HAVE HEARD AND BEEN TOLD THAT FARMING IS NO LONGER A WAY OF LIFE BUT A "BUSINESS" AND MUST BE RUN LIKE ONE. AS SUCH, PRIMARY AGRI-BUSINESS NEEDS TO ADOPT PROFESSIONAL MANAGEMENT TECHNIQUES SPECIFICALLY ADAPTED TO THE UNIQUE NEEDS OF THE PRIMARY AGRICULTURE INDUSTRY. THEREFORE I FEEL A DISCUSSION OF STRATEGIC PLANNING IS RELEVANT AT THIS "MAKE IT 90" FARM MANAGEMENT CONFERENCE.

REVIEW OF THE CANADA - U.S. TRADE AGREEMENT

THERE IS LITTLE DOUBT THAT AGRICULTURE, ONE OF THE MOST IMPORTANT SECTORS OF THE CANADIAN ECONOMY, DESERVES THE SPECIAL ATTENTION IT RECEIVED IN THE TRADE AGREEMENT (CUSTA) BETWEEN CANADA AND THE UNITED STATES.

AS THE CUSTA TAKES EFFECT, PRODUCERS, PROCESSORS, DISTRIBUTORS AND SUPPLIERS WILL BEGIN TO FEEL THE IMPACT OF ECONOMIC SHIFTS SPARKED BY THE AGREEMENT. FOR SOME, IT WILL CHANGE WHAT CROPS THEY GROW, WHAT THEY PROCESS AND WHERE THEY PROCESS IT. FOR OTHERS, IT WILL CHANGE SOURCES OF SUPPLY, COSTS AND POTENTIAL MARKETS.

FOR CANADIANS, THE MAIN BENEFIT OF THE AGREEMENT LIES IN ITS POTENTIAL TO PROVIDE RELIEF FROM THE PROBLEMS OF A LIMITED DOMESTIC MARKET AND UNCERTAIN ACCESS TO THE LARGER U.S. MARKET. INCREASING THE SIZE OF THE MARKETS AVAILABLE TO SOME CANADIAN AGRICULTURE PRODUCTS REQUIRES THE ELIMINATION OF TRADITIONAL TARIFF BARRIERS, WHILE IMPROVING THE SECURITY OF ACCESS TO U.S. MARKETS ENTAILS SETTLING A NUMBER OF MORE DIVISIVE ISSUES, SUCH AS DISPUTES AND CONTINGENCY PROTECTION MEASURES.

MAJOR THEME OF THE CUSTA

THE AGREEMENT IS NOT EXACTLY WHAT ITS TITLE SUGGESTS, ESPECIALLY AS IT RELATES TO AGRICULTURE. IT IS A DOCUMENT THAT WILL ALLOW NOT FOR "FREE" TRADE BUT FOR THE MANAGED LIBERALIZATION OF MANY ASPECTS OF BUSINESS AND TRADE BETWEEN CANADA AND THE U.S. IT IS AN IMPORTANT STEP FORWARD IN AN ERA WHEN THE TREND HAS BEEN TOWARD INCREASED PROTECTIONISM AND THE CONTINUING DETERIORATION OF THE INTERNATIONAL TRADING SYSTEM, PARTICULARLY IN THE GRAIN INDUSTRY. THE AGREEMENT PROBABLY ACHIEVES MUCH MORE THAN WAS THOUGHT POSSIBLE AT THE OUTSET. WHILE IT IS TRUE THOSE WITH VESTED

INTERESTS IN THE EXISTING SYSTEM HAVE MANAGED TO INJECT SOME OF THEIR CONCERNS INTO THE CUSTA, THE NEGOTIATORS APPEAR TO HAVE KEPT THESE BIASES TO A MINIMUM.

ON BALANCE, THE AGREEMENT IS DOUBLE-EDGED. IT IS A BROAD DOCUMENT THAT CAN PROVIDE A TREMENDOUS IMPETUS FOR EXPANDED TRADE AND THE INTEGRATION OF ECONOMIC ACTIVITY BETWEEN CANADA AND THE U.S. HOWEVER, IT IS ALSO WEAK IN A FEW KEY AREAS THAT CANADIAN INTERESTS ARE LEFT VIRTUALLY UNPROTECTED.

IT IS LIKELY THAT THE EFFECTIVENESS OF THE AGREEMENT WILL FLUCTUATE OVER TIME ACCORDING TO CHANGES IN THE POLITICAL PHILOSOPHIES IN THE TWO COUNTRIES. CLEARLY, THE NEXT FEW YEARS WILL BE CRUCIAL. IF THE SPIRIT THAT CONCEIVED THE DOCUMENT CARRIES OVER INTO ITS INITIAL IMPLEMENTATION, THEN IMPORTANT PRECEDENTS IN THE OPERATION OF THE AGREEMENT WILL BE ESTABLISHED AND THE LONGER-TERM EFFECTIVENESS OF THE AGREEMENT AS A TRADE LIBERALIZING MECHANISM WILL BE INCREASED.

CANADA - U.S. TRADE COMMISSION

A CANADA - U.S. TRADE COMMISSION HAS BEEN SET UP TO IMPLEMENT THE AGREEMENT, TO RESOLVE DISPUTES, OVERSEE FURTHER NEGOTIATIONS AND CONSIDER RELATED MATTERS. ITS MEMBERS ARE CABINET LEVEL OFFICERS OR MINISTERS RESPONSIBLE FOR INTERNATIONAL TRADE (OR THEIR DESIGNATES).

THE COMMISSION IS TO MEET AT LEAST ONCE A YEAR TO REVIEW IMPLEMENTATION OF THE AGREEMENT. IT CAN ESTABLISH AND DELEGATE RESPONSIBILITIES TO AD HOC OR STANDING COMMITTEES OR WORKING GROUPS AND SEEK OUTSIDE ADVICE FROM INDIVIDUALS OR GROUPS. PROCEDURES AND RULES OF OPERATION ARE DEVELOPED BY THE COMMISSION AND DECISIONS ARE MADE BY CONSENSUS.

WORKING GROUPS

UNDER THE AGREEMENT, THE TRADE COMMISSION CAN ESTABLISH WORKING GROUPS TO DEAL WITH PARTICULAR SECTORS AND TOPICS. FOR EXAMPLE, ONE WORKING GROUP IS TO FURTHER DEVELOP RULES ON GOVERNMENT SUBSIDIES AND CONSIDER PROBLEMS ARISING FROM THE DISPUTE SETTLEMENT PROCESS.

HOWEVER, IT IS IN THE AGRICULTURE SECTOR THAT THE MOST CLEARLY DEFINED WORKING GROUPS ARE TO BE SET UP, AS FOLLOWS:

- . GRAINS AND OILSEEDS
- . ANIMAL HEALTH
- . PLANT HEALTH, SEEDS AND FERTILIZER
- . MEAT AND POULTRY INSPECTION
- . DAIRY, FRUIT, VEGETABLES AND EGG INSPECTION
- . VETERINARY DRUGS AND FEED
- . FOOD, BEVERAGE AND COLOUR ADDITIVES AND UNAVOIDABLE CONTAMINANTS
- . PESTICIDES
- . PACKAGING AND LABELLING OF AGRICULTURE, FOOD, BEVERAGE AND CERTAIN RELATED GOODS FOR HUMAN CONSUMPTION.

THESE GROUPS ARE TO REPORT TO A JOINT MONITORING COMMITTEE WHICH REPORTS TO EACH GOVERNMENT AND THE COMMISSION. THE GRAINS AND OILSEEDS GROUP IS TO ADDRESS SUBSIDY MEASUREMENT WHILE THE REMAINING EIGHT ARE TO DEAL WITH HARMONIZATION ISSUES.

A SPECIAL FEATURE OF THE AGREEMENT CALLS ON THE TWO COUNTRIES TO MEET AT LEAST EVERY SIX MONTHS TO DISCUSS AGRICULTURAL ISSUES. THIS FORUM, WHICH WILL HELP CANADA ADDRESS U.S. ACTIONS IN AGRICULTURE, IS A POSITIVE STEP FORWARD.

NOW LET US LOOK AT SPECIFIC SECTORS IN THE AGRICULTURE INDUSTRY.

GRAIN AND OILSEED INDUSTRY

CANADA'S GRAIN AND OILSEED INDUSTRY IS EXPORT-ORIENTED WITH MORE THAN 50 PER CENT OF PRODUCTION SHIPPED OUTSIDE THIS COUNTRY. PRAIRIE WHEAT, BARLEY AND CANOLA ARE THE MAJOR EXPORT CROPS, WITH WHEAT ACCOUNTING FOR ABOUT 65 PER CENT OF THIS. MOST OF THIS TRADE IS WITH THIRD COUNTRIES, SUCH AS THE U.S.S.R., JAPAN AND CHINA, RATHER THAN THE U.S.

ELIMINATION OF TARIFFS

CURRENT TARIFFS ON SELECTED GRAINS AND OILSEEDS AND THEIR PRODUCTS ARE, FOR THE MOST PART, THE SAME IN CANADA AND THE U.S. THE EXCEPTIONS ARE TARIFFS ON OILS AND MILLING WHEAT AND ITS PRODUCTS. THESE TARIFFS WILL BE PHASED OUT OVER A 10-YEAR PERIOD. HOWEVER, DUTIES ON ANIMAL FEEDS WERE ELIMINATED THE DAY THE AGREEMENT BECAME EFFECTIVE.

THE ELIMINATION OF TARIFFS WILL HAVE A POSITIVE EFFECT ON THE OILSEED INDUSTRY IN EASTERN CANADA, PARTICULARLY AS THE EAST HAS A SURPLUS OF OIL. THE GRADUAL ELIMINATION OF THE 22.5 PER CENT OF U.S. TARIFF ON SOYBEAN OIL, FOR EXAMPLE, SHOULD PROVIDE THE CANADIAN INDUSTRY WITH BETTER ACCESS TO THE SUBSTANTIAL EDIBLE OIL MARKET IN THE NORTHEASTERN UNITED STATES. ELIMINATION OF THE TARIFFS UNDER THE AGREEMENT WILL ALSO LEAD TO IMPROVED MARKET ACCESS FOR THE CANADIAN CANOLA INDUSTRY.

SUBSIDIES IN THE GRAIN INDUSTRY

UNDER THE AGREEMENT, CANADA AND THE U.S. AGREED TO WORK TOGETHER TOWARD THE WORLDWIDE ELIMINATION OF TRADE DISTORTING SUBSIDIES TO PRODUCERS. THIS WILL BENEFIT THE GRAIN INDUSTRY BECAUSE A MAJOR INDIRECT CAUSE OF LOW RETURNS IS THE SUBSIDIES AVAILABLE TO GRAIN AND OILSEED PRODUCERS, ESPECIALLY IN THE EUROPEAN ECONOMIC COMMUNITY (EEC) AND THE U.S. THE GATT ROUND, NOW IN PROGRESS, IS THE MAJOR FORUM WHERE SUBSIDY ISSUES WILL BE ADDRESSED.

BOTH PARTIES HAVE AGREED NOT TO IMPOSE EXPORT SUBSIDIES ON BILATERAL TRADE, STRENGTHENING THE INFORMAL UNDERSTANDING NOW IN EFFECT. MORE IMPORTANT, HOWEVER, IT IS THE UNDERSTANDING THAT BOTH CANADA AND THE U.S. WILL CONSIDER

THE INDIRECT EFFECT OF SUBSIDIES ON SALES TO THIRD COUNTRIES, PARTICULARLY WHEN THE TWO COMPETE FOR THESE SALES. WHILE NOT ENFORCEABLE, THIS FEATURE, KINDLES A SPIRIT OF CO-OPERATION IN THE GRAIN MARKET. IT IS A GROUNDBREAKING ELEMENT, THAT, IF EFFECTIVE, SHOULD BENEFIT CANADA.

WHEN THE WESTERN GRAIN TRANSPORTATION ACT (WGTA) WAS IMPLEMENTED, PRODUCTS MOVING TO VANCOUVER BEFORE BEING EXPORTED TO THE U.S. BECAME ELIGIBLE FOR A TRANSPORTATION SUBSIDY. THIS CREATED AN OPPORTUNITY TO SELL PRODUCTS LIKE CANADIAN CANOLA MEAL AND MILLFEEDS INTO THE U.S. PACIFIC NORTHWEST, BUT PLACED SIMILAR AMERICAN PRODUCTS AT A DISADVANTAGE. CANADA HAS AGREED TO DISCONTINUE THE WGTA SUBSIDIZED RATE ON WEST COAST EXPORTS TO THE U.S. HOWEVER, THE AGREEMENT ALLOWS A WGTA RATE TO BE APPLIED TO PRODUCTS EXPORTED TO THE U.S. THROUGH THUNDER BAY AND OTHER EASTERN POINTS.

MARKET ACCESS

WHEAT SUBSIDIES IN THE U.S. ARE ABOUT \$50 A TONNE HIGHER THAN IN CANADA. UNDER THE FTA, CANADA HAS AGREED TO LIFT IMPORT RESTRICTIONS IMPOSED ON CHEAPER AMERICAN WHEAT ONCE U.S. SUBSIDIES ARE REDUCED TO MATCH CANADIAN LEVELS.

SIMILAR MEASURE WILL BE APPLIED TO OATS AND BARLEY, THOUGH THE DIFFERENCE IN SUBSIDY LEVELS FOR THESE CROPS IS NOT AS SIGNIFICANT.

THE GRAINS AND OILSEEDS WORKING GROUP IS TO FOCUS ON THIS ISSUE DIRECTLY.

THE RATIONALE FOR DETERMINING SUBSIDY EQUIVALENCY LEVELS IS SET OUT IN GREAT DETAIL IN THE FTA DOCUMENT. SOME OF THE CANADIAN PROGRAMS INCLUDED IN THE DEFINITION OF TOTAL GOVERNMENT SUPPORT ARE: SPECIAL CANADIAN GRAINS, OTHER FEDERAL AND PROVINCIAL STABILIZATION PROGRAMS, CANADIAN WHEAT BOARD (CWB) POOL DEFICITS, WESTERN GRAIN STABILIZATION PAYMENTS, TWO PRICE WHEAT POLICY, CASH ADVANCE PROGRAMS, CROP INSURANCE, BRANCH LINE REHABILITATION, RESEARCH EXPENDITURES, AND PROVINCIAL GOVERNMENT AGRICULTURAL EXPENDITURES. ALLOCATION OF EXPENDITURES, IF NOT SPECIFICALLY IDENTIFIED BY CROP, IS TO BE BASED ON A CROP'S CASH RECEIPTS RELATIVE TO TOTAL CASH RECEIPTS.

U.S. PROGRAMS INCLUDE ALL PROVISIONS OF THE 1985 U.S. FOOD SECURITY ACT (FARM BILL) AND RELATED EXPORT SUBSIDIES. GENERAL GOVERNMENT SERVICE PROGRAMS ARE ALSO INCLUDED (E.G., CORPS OF ENGINEERS INLAND WATERWAY PROGRAMS AND RESEARCH AND STATE AGRICULTURE BUDGETS ATTRIBUTED TO INDIVIDUAL GRAINS).

TO ALLEVIATE CONCERNS ABOUT PRESERVING THE QUALITY AND CONSISTENCY OF CANADIAN GRAINS AND OILSEEDS, THE AGREEMENT SETS OUT THREE CONDITIONS UNDER WHICH U.S. PRODUCTS CAN BE IMPORTED:

- . IF AN END-USE CERTIFICATE IS PROVIDED BY THE IMPORTER DECLARING CONSUMPTION IN CANADA AND USER CONSIGNMENT
- . IF IT IS DENATURED (I.E., HEATED) GRAIN USED FOR FEED
- . IF A CERTIFICATE IS ISSUED BY AGRICULTURE CANADA FOR SEED USE.

THE CWB RETAINS THE RIGHT TO ISSUE EXPORT PERMITS FOR SALE OF PRAIRIE WHEAT, OATS AND BARLEY.

THE AGREEMENT ALLOWS EACH COUNTRY TO INTRODUCE NEW CONTROLS OR RE-INTRODUCE CURRENT IMPORT RESTRICTIONS ON GRAINS (WHEAT, OATS, BARLEY, RYE, CORN TRITICALE AND SORGHUM) AND THEIR PRODUCTS (AT LEAST 25 PER CENT BY WEIGHT OF GRAIN) IF IMPORTS INCREASE SIGNIFICANTLY AS A RESULT OF SUBSTANTIAL CHANGE TO AGRICULTURAL PROGRAMS.

FOR EXAMPLE, A COUNTERVAILING DUTY (CVD) MAY BE IMPOSED ON U.S. RYE IF SUPPORT PAYMENTS AND SUBSIDIES ON THIS CROP INCREASE SIGNIFICANTLY AND IMPORTS INTO CANADA ALSO RISE. HOWEVER, IT APPEARS THAT A CVD OR ANTI-DUMPING CASE CANNOT BE BROUGHT FORWARD WITHOUT A SUBSTANTIAL CHANGE IN SUPPORT FROM CURRENT LEVELS. MOREOVER, THE AGREEMENT DOES NOT AFFECT ANY CVD NOW IN PLACE.

IN THE BILATERAL TRADE AREA, LOW ERUCIC ACID RAPESEED (CANOLA) OIL RECENTLY OBTAINED A GRAS (GENERALLY REGARDED AS SAFE) STATUS IN THE U.S., A DEVELOPMENT THAT HAS IMPROVED ITS EXPORT PROSPECTS. IN THE AGREEMENT, THE LABEL "CANOLA" CAN NOW BE SUBSTITUTED FOR RAPESEED, A BENEFIT TO MARKETING OF CANOLA FROM WESTERN CANADA.

TWO PRICE WHEAT POLICY

BORDER RESTRICTIONS HAVE LIMITED THE FLOW OF PRODUCTS BETWEEN THE TWO COUNTRIES, SETTING THE STAGE FOR THE CANADIAN TWO PRICE WHEAT POLICY WHEREBY DOMESTIC MILLERS PAY, AT TIMES, SIGNIFICANTLY HIGHER PRICES FOR WHEAT THAN ARE WARRANTED RELATIVE TO U.S. OR EXPORT PRICES. ALTHOUGH THIS MEANS THAT BAKED GOODS CAN BE PRODUCED MORE CHEAPLY IN THE U.S. THAN IN CANADA, THE CWB WHICH HAS THE POWER TO RESTRICT THE FLOW OF AMERICAN BAKERY PRODUCTS ACROSS THE

BORDER, HAS NOT DONE SO. IN RESPONSE, THE U.S. MANUFACTURERS HAVE VOLUNTARILY LIMITED THE VOLUME OF BAKED GOODS THEY EXPORT TO CANADA.

A CONSEQUENCE OF THE AGREEMENT IS THAT CANADA WILL PHASE OUT THE TWO PRICE WHEAT POLICY, A DEVELOPMENT THAT WILL FORCE DOMESTIC PRICES DOWN TO EXPORT-PRICE LEVELS. THIS IS AN IMPORTANT STEP BECAUSE IT WILL PLACE CANADIAN BAKED-GOOD MANUFACTURERS ON AN EQUAL FOOTING WITH THEIR AMERICAN COUNTERPARTS. WHEN THIS OCCURS, A SUBSIDY PACKAGE DESIGNED TO OFFSET FINANCIAL LOSSES WILL LIKELY BE INTRODUCED, THOUGH A SUNSET CLAUSE WILL PROBABLY PHASE THIS OUT OVER A NUMBER OF YEARS. THE REMAINING ISSUE TO BE DECIDED IS HOW THE PAYMENTS WILL BE DISTRIBUTED TO EASTERN AND WESTERN WHEAT PRODUCERS.

EFFECTS OF THE FTA

THE OVERALL EFFECT OF THE ELIMINATION OF THE TWO PRICE WHEAT POLICY WILL VARY ACROSS THE COUNTRY AND, INDEED, WITHIN THE INDUSTRY ITSELF. FOR EXAMPLE, REVENUE REDUCTIONS SUFFERED BY PRAIRIE PRODUCERS, WHOSE DOMESTIC MARKET IS SMALL RELATIVE TO EXPORTS, SHOULD BE OFFSET BY INCREASED ACCESS TO THE U.S. MARKETS. THE SAME DOES NOT HOLD TRUE IN THE

EAST WHERE THE DOMESTIC MARKET HAS ABSORBED A COMPARATIVELY LARGER SHARE OF PRODUCTION AND WILL LIKELY CONTINUE TO DO SO.

BAKERY-PRODUCT MANUFACTURERS WITH SPECIALIZED PRODUCTS AND STRONG REGIONAL MARKET LOYALTY WILL LIKELY BENEFIT FROM LOWER DOMESTIC WHEAT PRICES. HOWEVER, FOR OTHERS, THE BENEFIT OF REDUCED PRICES MAY BE OFFSET BY THE INCREASED COMPETITION FROM A GREATER FLOW OF AMERICAN IMPORTS. WITH ITS TARIFF PROTECTION REMOVED, THE CANADIAN INDUSTRY MAY HAVE TO MAKE SOME DIFFICULT STRUCTURAL ADJUSTMENTS TO COMPETE PROFITABLY WITH THE EXCESS CAPACITY OF THE LARGE, VERTICALLY INTEGRATED AMERICAN MANUFACTURERS.

WESTERN BARLEY GROWERS STAND TO GAIN FROM INCREASED EXPORT OPPORTUNITIES WHILE THOSE IN THE MARITIMES MAY BE HAMPERED BY IMPORTS OF SURPLUS BARLEY FROM U.S. EAST-COAST PRODUCERS.

THE OILSEED INDUSTRY ACROSS CANADA STANDS TO GAIN FROM THE AGREEMENT.

FRUIT AND VEGETABLE INDUSTRIES

AN IMPORTANT FEATURE OF THE FRUIT AND VEGETABLE INDUSTRY IS THE SEASONAL NATURE OF THE TARIFFS THAT PROTECT GROWER INCOMES DURING HARVEST PERIODS. ON TABLE PEACHES, FOR EXAMPLE, A SEASONAL TARIFF (AD VALOREM TARIFF OF 12.5 PER CENT AND AT LEAST \$3.00/CWT) IS APPLIED FOR UP TO 14 WEEKS IN THE SUMMER MONTHS. AFTER THIS PERIOD, THERE IS NO TARIFF. THESE SEASONAL TARIFFS APPLY TO MOST FRESH FRUIT AND VEGETABLES, WITH APPLES AND POTATOES AS THE MAJOR EXCEPTIONS. IT SHOULD ALSO BE NOTED THAT THE LEVEL OF TARIFF PROTECTION ON BOTH SIDES OF THE BORDER INCREASES WITH THE DEGREE OF PROCESSING.

SAFEGUARDS

CURRENT CANADIAN TARIFFS ON FRESH FRUIT ARE HIGHER THAN THOSE IN THE U.S. (E.G., AT LEAST \$3.00/CWT COMPARED TO \$0.20/CWT ON PEACHES) WHILE THE RATES FOR VEGETABLES ARE GENERALLY COMPARABLE FOR BOTH COUNTRIES.

THOUGH THE AGREEMENT CALLS FOR TARIFFS ON FRUITS AND VEGETABLES AND THEIR PRODUCTS TO BE ELIMINATED OVER A 10-YEAR PERIOD, IT RECOGNIZES THE SPECIAL NEEDS OF THE FRESH FRUIT AND VEGETABLE SECTOR OF THE INDUSTRY. A TEMPORARY

DUTY, CALLED A "SNAPBACK" CAN BE APPLIED IN SPECIFIC CIRCUMSTANCES TO RESTORE CURRENT TARIFF RATES. THIS OPTION IS AVAILABLE

TO BOTH COUNTRIES FOR UP TO 20 YEARS. THE RATIONALE IS TO SMOOTH THE TRANSITION TO LOWER, AND FINALLY ZERO, TARIFF LEVELS AND TO PROVIDE RELIEF FROM ABNORMAL SEASONAL PRICE DEPRESSIONS.

THE SNAPBACK DUTY CAN BE APPLIED UNDER TWO CONDITIONS:

- . WHEN THE IMPORT PRICE FOR FIVE CONSECUTIVE WORKING DAYS FALLS BELOW A CALCULATED MONTHLY AVERAGE
- . WHEN THE PLANTED ACREAGE IN THE IMPORTING COUNTRY IS NOT HIGHER THAN THE FIVE-YEAR ACREAGE.

IT SHOULD BE NOTED THAT INCREASES IN FRUIT AND VEGETABLE ACREAGE THAT COME ABOUT BECAUSE OF ANTICIPATED REDUCTIONS IN GRAPE ACREAGE ARE EXCLUDED FROM THIS CALCULATION.

OF CONSIDERABLE IMPORTANCE TO CANADA IS THE FACT THAT THIS DUTY CAN BE APPLIED EITHER NATIONALLY OR REGIONALLY, THE REGIONS ARE DEFINED AS WESTERN CANADA, ONTARIO AND QUEBEC, AND ATLANTIC CANADA. PRESUMABLY, THE DUTY CAN APPLY TO ONE REGION WHILE ANOTHER MAY BE INELIGIBLE BECAUSE IT DOESN'T MEET THE PRICE AND/OR ACREAGE REQUIREMENTS.

ELIMINATION OF TARIFFS

TARIFF REDUCTION WILL BENEFIT SOME CANADIAN GROWERS AND PROCESSORS. FOR EXAMPLE, IN THE COLE CROPS (CAULIFLOWER, BROCCOLI AND CABBAGES), A REDUCTION IN U.S. TARIFFS, NOW RANGING FROM 17.5 TO 25 PER CENT, WILL PROVIDE SIGNIFICANT NEW OPPORTUNITIES TO EXPAND MARKETS. WHETHER THE SNAPBACK PROVISION WILL PROVIDE ADEQUATE PROTECTION FOR SOME PERISHABLE AND SHORT-SEASON TENDER FRUITS IS DEBATABLE. SEVEN WORKING DAYS (FIVE FOR CALCULATING THE FORMULA AND TWO FOR CONSULTATION) ARE NEEDED BEFORE THE SNAPBACK PROVISION CAN COME INTO EFFECT. IF, FOR EXAMPLE, AN ONTARIO CROP OF FRESH CHERRIES IS HARVESTED IN TWO WEEKS, AT THE SAME TIME AS THE MICHIGAN HARVEST, UP TO 50 PER CENT OF THE CROP COULD BE PRICED AT A HIGHER LEVEL (I.E. CDN. CROP). IT IS CLEAR THAT A LESS TIME-CONSUMING MECHANISM IS NEEDED FOR SOME CROPS WHERE THE ENTIRE SEASON'S PRICE STRUCTURE COULD BE DESTROYED IN A FEW DAYS.

THE SNAPBACK DUTY COULD HAVE A NEGATIVE EFFECT ON PROCESSORS WHO WILL FACE HIGHER INPUT COSTS WHEN IT IS IN EFFECT. AT THE SAME TIME, THEY WILL NOT HAVE ACCESS TO EQUIVALENT SNAPBACK SAFEGUARDS ON THEIR PROCESSED PRODUCTS.

UNDER THE FTA, THERE ARE INCONSISTENCIES IN THE TARIFF RELATIONSHIPS OF PRODUCERS AND PROCESSORS. FOR EXAMPLE, IN THE YEAR 2000, THE ONTARIO TOMATO PROCESSOR WILL NO TARIFF PROTECTION ON TOMATO PASTE OR JUICE, BUT THE SNAPBACK RATE ON TOMATOES COULD BE 15 PER CENT (THE CURRENT TARIFF LEVEL AND THE ONE THAT LIKELY WILL APPLY IN 2000). THIS IS THE REVERSE OF MOST CASES WHERE TARIFFS ON THE PROCESSED PRODUCTS ARE EQUAL TO, OR HIGHER THAN, TARIFFS ON THE FRESH PRODUCT.

THIS IS A WEAK POINT OF THE AGREEMENT, ONE THAT MAY PLACE SOME PROCESSORS AT A SEVERE COMPETITIVE DISADVANTAGE AS THEY PAY THE PRICE OF THE TRANSITION ADJUSTMENT GIVEN TO GROWERS.

EMERGENCY ACTIONS FOR PROCESSORS AND GROWERS

LIKE ALL INDUSTRIES UNDER THE FTA, FRUIT AND VEGETABLE PROCESSORS AND GROWERS CAN SEEK EMERGENCY RELIEF FROM LOSSES INCURRED AS A RESULT OF TARIFF REDUCTIONS AND CORRESPONDING INCREASES IN IMPORTS. IF IMPORTS OF PROCESSED PRODUCTS AT

A LOWER TARIFF RATE INJURE PROCESSORS (ALBEIT DUE TO THE SNAPBACK), THEN THE RATES THAT APPLIED BEFORE THE AGREEMENT WAS IMPLEMENTED CAN BE RESTORED FOR A THREE-YEAR PERIOD. WHEN CANADA APPLIES THESE RATES ON BEHALF OF A PARTICULAR SECTOR, TRADE CONCESSIONS WHICH COULD TAKE THE FORM OF

ACCELERATED TARIFF REDUCTION ON ANOTHER ITEM, MUST BE OFFERED AS COMPENSATION. WHETHER THIS EMERGENCY RELIEF IS OBTAINED DEPENDS ON THE WILLINGNESS OF OTHER CANADIAN PARTIES TO OFFER ACCELERATED TARIFF REDUCTIONS.

DISPUTE SETTLEMENT

THE DISPUTE SETTLEMENT MECHANISM PROVIDES AN APPEAL PROCESS WHEN AMERICAN ACTIONS ARE TAKEN AGAINST CANADIAN FRUIT AND VEGETABLE EXPORTS.

THE POTATO SECTOR IS A CASE IN POINT. THE RIGHT TO SEEK REDRESS AGAINST DUMPED AND SUBSIDIZED PRODUCT IS RETAINED UNDER THE FTA. WITH THE PROVISION OF THE DISPUTE SETTLEMENT MECHANISM, ANY COUNTERVAILING DUTY OR DUMPING ACTION BROUGHT ON BY THE AMERICANS AGAINST CANADIAN POTATOES CAN BE APPEALED TO A BILATERAL PANEL WITH BINDING POWERS. THIS REPLACES THE CURRENT APPEAL PROCESS WHICH IS TO RESPECTIVE DOMESTIC COURTS. BECAUSE RIGOROUS STANDARDS WILL BE APPLIED TO THE APPOINTMENT OF THE FIVE MEMBERS WHO WILL SIT ON THE PANEL, THE REVIEW PROCESS SHOULD IMPROVE CONSIDERABLY. THOUGH ITS EFFECTIVENESS CAN'T BE MEASURED UNTIL IT IS PUT TO THE TEST, THE PANEL IS EXPECTED TO BE LESS SUSCEPTIBLE

TO POLITICAL PRESSURE. THIS ACTION, AS WELL AS THE GENERAL SPIRIT OF THE AGREEMENT, SHOULD IMPROVE THE SECTOR'S OPPORTUNITY FOR CONTINUED ACCESS TO U.S. MARKETS.

POTENTIAL OUTCOMES

THE AGREEMENT PERMITS UNRESTRICTED MARKET ACCESS FOR PRODUCTS CONTAINING LESS THAN 10 PER CENT SUGAR, A PROVISION THAT SHOULD BENEFIT THE CANADIAN SUGAR INDUSTRY BY PROVIDING MORE CERTAIN MARKETS FOR SUGAR BEET AND HIGH FRUCTOSE CORN SWEETENER PRODUCERS.

PRODUCERS AND PROCESSORS OF STORABLE FRUITS AND VEGETABLES (E.G., POTATOES AND APPLES) WILL LIKELY SEE GREATER MARKET OPPORTUNITIES. PRODUCERS OF TENDER FRUITS AND PERISHABLE VEGETABLES WILL BE PLACED AT SOMEWHAT OF A DISADVANTAGE BECAUSE THE SNAPBACK TARIFF LIKELY WON'T PROVIDE ADEQUATE RELIEF. PROCESSORS OF THESE PRODUCTS COULD ALSO BE HAMPERED IF TARIFFS ON FRESH AND PROCESSED PRODUCTS ARE NOT MADE CONSISTENT. CONSUMERS OF TENDER FRUIT PRODUCTS, HOWEVER, COULD BENEFIT FROM LOWER PRICES.

RED MEAT

THE RED MEAT INDUSTRY, MADE UP OF BEEF, PORK AND SHEEP PRODUCTS, IS A SIGNIFICANT CONTRIBUTOR TO THE CANADIAN AGRICULTURAL ECONOMY. IN 1986, FOR EXAMPLE, RED MEAT EXPORTS TOTALLED \$742-MILLION WHILE IMPORTS STOOD AT \$166-MILLION. TRADE IN PORK AND ASSOCIATED PRODUCTS ACCOUNTED FOR \$510-MILLION OF THIS TOTAL WHILE BEEF CONTRIBUTED ANOTHER \$180-MILLION. BECAUSE MAJOR MEAT PROCESSING PLANTS ARE LOCATED IN EVERY REGION, THE ENTIRE COUNTRY IS AFFECTED BY ISSUES THAT AFFECT TRADE IN THIS AREA.

WHILE FREE TRADE NOMINALLY EXISTS IN THIS SECTOR, A NUMBER OF FACTORS HAVE IMPEDED THE FLOW OF GOODS BETWEEN CANADA AND THE U.S. OVER THE YEARS, CANADIAN EXPORTS HAVE BECOME ALL TOO FAMILIAR WITH THE FRUSTRATIONS OF NON-TARIFF BARRIERS SUCH AS COUNTERVAILING DUTIES, MEAT IMPORT QUOTAS AND UNPREDICTABLE BORDER INSPECTIONS. OTHER PROBLEMS, SUCH AS DIFFERENCES IN THE GRADING SYSTEM FOR CATTLE AND HOGS, HAVE ALSO HAMPERED TRADE IN THESE COMMODITIES.

ELIMINATION OF TARIFFS

THE EXISTING TARIFF STRUCTURES FOR BEEF AND PORK ARE VIRTUALLY THE SAME IN THE U.S. AND CANADA, THOUGH THE ACTUAL RATES DIFFER SLIGHTLY. IN BOTH COUNTRIES, THE LOWEST TARIFFS ARE IMPOSED ON LIVE ANIMALS. THESE TARIFFS INCREASE WITH THE DEGREE OF VALUE ADDED AS THE TWO COUNTRIES HAVE ATTEMPTED TO PROTECT THEIR DOMESTIC MEAT-PROCESSING INDUSTRIES.

UNDER THE FTA, TARIFFS ON LIVESTOCK AND MEAT PRODUCTS WILL BE ELIMINATED IN EQUAL ANNUAL STEPS OVER 10 YEARS.

MARKET ACCESS

BEEF IMPORT QUOTAS, IMPOSED BY BOTH COUNTRIES AND ADJUSTED ANNUALLY, HAVE BECOME CONTENTIOUS WHEN THIRD PARTIES, SUCH AS AUSTRALIA AND THE EUROPEAN ECONOMIC COMMUNITY, HAVE CREATED PROBLEMS. NEVERTHELESS, THE FTA WILL EXEMPT BOTH CANADIAN AND AMERICAN BEEF FROM THE OTHER'S QUOTAS.

COUNTERVAILING DUTIES ARE A PARTICULAR CONCERN TO CANADIAN PORK PRODUCERS WHO HAVE BEEN ACCUSED OF DUMPING HOGS AND FRESH PORK INTO THE AMERICAN MARKET. IN 1985, THE U.S.

GOVERNMENT IMPOSED A TEMPORARY CVD ON HOGS AND FRESH PORK FROM CANADA, CLAIMING THAT CANADIAN SUBSIDIES WERE GIVING CANADIAN PRODUCERS AN UNFAIR ADVANTAGE. WHILE THE DUTY ON PORK WAS EVENTUALLY LIFTED ENTIRELY AND THAT ON LIVE HOGS WAS REDUCED, ACTIONS LIKE THIS RESTRICT THE MARKETS AVAILABLE TO PRODUCERS AND CONTRIBUTE TO THEIR UNPREDICTABILITY.

AGREEMENT ON TECHNICAL STANDARDS

UNDER THE FTA, TECHNICAL GRADING AND INSPECTION STANDARDS IN THE TWO COUNTRIES ARE TO BE HARMONIZED. THIS SHOULD HELP DEFUSE THE FRUSTRATIONS EXPERIENCED BY MANY CANADIAN EXPORTERS WHOSE TRUCKS ARE HELD UP FOR INSPECTIONS AT BORDER STATIONS, OFTEN WITHOUT WARNING. FOR RED MEAT PROCESSORS, THE AGREEMENT SPELS OUT PROCEDURES THAT ARE TO BE IMPOSED IN THE AREA OF TECHNICAL STANDARDS, A SOURCE OF CONSIDERABLE DEBATE. BOTH COUNTRIES HAVE ALSO AGREED TO DEVELOP A MUTUALLY ACCEPTABLE ACCREDITATION SYSTEM FOR THEIR TECHNICAL EXPERTS. AND, WHILE BORDER INSPECTIONS ARE TO BECOME MORE PREDICTABLE, THE AGREEMENT IMPLIES THAT INSPECTORS CAN CONTINUE TO UNDERTAKE SPOT CHECKS AS THEY SEE FIT. HOWEVER, THE INSPECTIONS OF CANADIAN GOODS ARE TO BE NO MORE FREQUENT THAN THOSE IMPOSED ON AMERICAN PRODUCTS.

SUPPLY MANAGEMENT INDUSTRIES

THE FTA UPHOLDS THE PRINCIPLE OF SUPPLY MANAGEMENT ENSHRINED IN GATT PROVISIONS, INCLUDING ARTICLE XI WHICH ENABLES CANADA TO IMPOSE BORDER CONTROLS AND INTRODUCE NEW SUPPLY MANAGEMENT BOARDS IN ADDITION TO THOSE THAT ALREADY EXIST.

IN THE AGREEMENT, LITTLE EMPHASIS IS PLACED ON THE DAIRY INDUSTRY, IMPLYING THAT IT FACED LITTLE THREAT OF CHANGE ON EITHER SIDE OF THE BORDER.

THE POULTRY INDUSTRY IS MORE CONTROVERSIAL BECAUSE CANADIAN MARKET PRICES, PRODUCTION LEVELS AND MARKET ACCESS ARE CONTROLLED. UNDER THE AGREEMENT, MOST OF THESE PROVISIONS WILL REMAIN INTACT. IN SHARP CONTRAST TO CANADA, THEN AMERICAN INDUSTRY IS VERTICALLY INTEGRATED, PRODUCTION RESPONDS TO MARKET SIGNALS AND PRICES ARE NOT REGULATED.

MARKET ACCESS

THE VOLUME OF U.S. POULTRY AND EGG PRODUCTS ENTERING CANADA WILL INCREASE WITH THE SLIGHT RISE IN GLOBAL IMPORT QUOTAS AS FOLLOWS:

- . CHICKENS AND CHICKEN PRODUCTS WILL RISE TO 7.5 PER CENT OF CANADIAN ANNUAL GLOBAL QUOTA FROM ABOUT 6.3 PER CENT.
- . TURKEY AND TURKEY PRODUCTS WILL RISE TO 3.5 PER CENT OF CANADIAN ANNUAL GLOBAL QUOTA FROM ABOUT 2.0
- . EGGS AND EGG PRODUCTS WILL RISE TO 1.647 PER CENT FOR SHELL EGGS, 0.714 PER CENT FOR FROZEN, LIQUID AND FURTHER PROCESSED EGGS AND 0.627 PER CENT FOR POWDERED EGGS.

ALL PRIMARY PROCESSED CHICKEN AND TURKEY PRODUCTS ARE COVERED BY THE CURRENT IMPORT CONTROL LIST ADMINISTERED BY THE MINISTRY OF EXTERNAL AFFAIRS. THESE PRODUCTS INCLUDE LIVE OR EVISCERATED CHICKEN AND TURKEY, AND THEIR PRODUCTS THAT MAY BE BREADED OR BATTERED. HOWEVER, CANADIAN FOOD PROCESSORS ARE CONCERNED ABOUT HIGHLY PROCESSED PRODUCTS NOT ON THE IMPORT CONTROL LIST.

ELIMINATION OF TARIFFS

TARIFFS ON ALL SUPPLY PRODUCTS, INCLUDING POULTRY, WILL BE ELIMINATED IN EQUAL ANNUAL STEPS OVER THE NEXT 10 YEARS. THIS IS A SOURCE OF CONCERN FOR FOOD PROCESSORS WHO USE CANADIAN CHICKEN OR TURKEY PRODUCTS TO PRODUCE HIGHLY PROCESSED PRODUCTS SUCH AS TV DINNERS BECAUSE CANADIAN INPUT COSTS ARE HIGHER THAN THOSE IN THE U.S. AND COMPETING AMERICAN PRODUCTS ARE NOT INCLUDED ON THE IMPORT CONTROL LIST. THIS COULD PLACE CANADIAN MANUFACTURERS AT A SEVERE DISADVANTAGE.

THE THREAT TO HIGHLY PROCESSED PRODUCTS

AMONG THE HIGHLY PROCESSED CHICKEN PRODUCTS NOT INCLUDED IN THE IMPORT CONTROL LIST BUT ALLOWED MARKET ACCESS TO CANADA ARE, AMONG OTHERS, CHICKEN CORDON BLEU, CHICKEN KIEV AND CHICKEN TV DINNERS. SIMILARLY, A NUMBER OF HIGHLY PROCESSED TURKEY PRODUCTS, SUCH AS TURKEY CORDON BLEU, TURKEY KIEV AND TURKEY DINNERS, WILL ALSO BE ALLOWED ACCESS TO CANADIAN MARKETS.

THE PORTION OF THIS EXPANDING MARKET THAT WILL BE CAPTURED BY CANADIAN PROCESSORS AFTER THE FTA COMES INTO EFFECT IS NOT CLEAR. HOWEVER, IT SHOULD BE NOTED THAT THERE IS

PROVISION FOR THE CANADIAN GOVERNMENT TO ADD THESE PRODUCTS TO THE IMPORT CONTROL LIST IF THE INDUSTRY APPEARS TO BE SERIOUSLY DAMAGED. IN THE DAIRY INDUSTRY, FOR EXAMPLE, MANY PRODUCTS WERE RECENTLY ADDED TO THE IMPORT CONTROL LIST.

EFFECT ON CONSUMERS

UNDER THE FTA, THE SUPPLY MANAGEMENT SYSTEM IS LARGELY MAINTAINED AND MOST U.S. PRODUCTS WILL HAVE ONLY LIMITED ACCESS TO CANADIAN MARKETS. THIS MEANS THAT CONSUMERS CAN EXPECT NO MAJOR PRICE REDUCTIONS. AT BEST, PRICES WILL DECLINE AT THE SAME RATE AS TARIFFS, AND AT WORST, THERE WILL BE NO CHANGE.

THERE IS ALSO A SECTION WITH RESPECT TO WINE AND DISTILLED SPIRITS WHICH I BELIEVE DOES NOT REALLY AFFECT US HERE IN NEW BRUNSWICK SO I WON'T DISCUSS IT AT THIS POINT; HOWEVER, IF YOU LIKE IT MAY BE A TOPIC OF DISCUSSION IN THE BEAR PIT SESSIONS THIS EVENING.

SO WHAT DOES THE FOREGOING MEAN TO US AS PRIMARY PRODUCERS.

A STRATEGIC PLANNING FRAMEWORK

AS INDICATED EARLIER I'M GOING TO DIRECT THE NEXT PORTION OF MY PRESENTATION AS IF I WAS SPEAKING TO A GROUP OF BUSINESS PEOPLE REGARDLESS OF THE TYPE OF BUSINESS WITH OF COURSE PARTICULAR COMMENTS AS THEY RELATE TO AGRICULTURE. WE WILL BE FOCUSING ON STRATEGIC PLANNING IN RESPONSE TO THE CUSTA. THE FOLLOWING COMMENTS APPLY EQUALLY TO A FARM BUSINESS AND A FARM ORGANIZATION.

BEFORE WE GET INTO THE SPECIFICS OF THE PLANNING PROCESS, THE QUESTION ANY BUSINESS MUST ASK THEMSELVES IS "WHY ARE WE DOING WHAT WE ARE DOING, WHY ARE WE IN BUSINESS." AT FIRST GLANCE THIS MAY SEEM LIKE A DUMB QUESTION IN THAT WE ALL KNOW WHY WE ARE IN BUSINESS. WE'RE DAIRY OR HOG FARMERS, POTATO GROWERS, POULTRY PRODUCERS AND SO ON. HOWEVER, HOW MANY OF YOU HAVE SERIOUSLY ASKED YOURSELVES THIS QUESTION AND DISCUSSED IT WITH YOUR FAMILIES?

IT MAY BE USEFUL TO QUOTE FROM LEWIS CARROLL'S "ALICE'S ADVENTURES IN WONDERLAND" TO ILLUSTRATE THE POINT. THE QUOTE IS FROM A DISCUSSION BETWEEN ALICE AND THE CHESHIRE CAT:

ALICE, "WOULD YOU TELL ME PLEASE, WHICH WAY I OUGHT TO GO FROM HERE?"

CAT, "THAT DEPENDS A GOOD DEAL ON WHERE YOU WANT TO GO TO."

OBJECTIVES, STRATEGIES AND PLANS CAN ONLY BE KNOWLEDGEABLY DEVELOPED IF MANAGEMENT HAS A CLEAR VISION OF THE FUTURE DIRECTION FOR THE BUSINESS AND WHAT TYPE OF BUSINESS ACTIVITIES ARE TO BE UNDERTAKEN.

TO ILLUSTRATE, IT IS SIMPLY NOT GOOD ENOUGH TO SAY "I'M GOING TO BE A DAIRY FARMER". IT WOULD MAKE MORE SENSE TO INCORPORATE MORE INFORMATION SUCH AS:

- . TO BE KNOWN AS THE LARGEST SHIPPER OF QUALITY HOLSTEIN MILK IN THE PROVINCE WITH THE HIGHEST PRODUCTION PER COW;
- OR

TO ESTABLISH A PUREBREAD JERSEY HERD THAT NOT ONLY PRODUCES TOP QUALITY MILK BUT ALSO IS THE NUMBER ONE SELLER OF JERSEY BREEDING STOCK IN ATLANTIC CANADA.

YOU MAY ALSO WANT TO INCORPORATE PERSONAL AND FAMILY VALUES. AGAIN THIS STATEMENT MAY APPEAR TO BE SELF-EVIDENT; HOWEVER, WITH A FEW SHORT WRITTEN STATEMENTS ONE CAN ESTABLISH A CREDO OR MISSION STATEMENT FOR THE BUSINESS THAT EVERY ONE BELIEVES IN AND AGREES WITH.

THIS THEN BECOMES THE BENCHMARK BY WHICH ALL ACTIVITIES UNDERTAKEN BY THE BUSINESS ARE MEASURED.

NOW, TO RETURN TO THE CUSTA AND THE PLANNING PROCESS, AND HOW THE CUSTA MAY IMPACT ON YOUR BUSINESS.

UNDER THE PLANNING PROCESS IT IS NECESSARY TO SET OBJECTIVES, STRATEGIES, ACTIVITIES AND ASSOCIATED IMPLEMENTATION PLANS. PUT IN OTHER WORDS, THE ABOVE CREDO OR MISSION STATEMENT IS THE WHY WE ARE IN BUSINESS, THE OBJECTIVES ARE WHAT WE WANT TO ACCOMPLISH DURING A PARTICULAR TIME FRAME (USUALLY ONE YEAR), THE STRATEGIES ARE HOW WE ARE GOING TO ACHIEVE THE OBJECTIVES, WITH ACTION PLANS PROVIDING THE WHO AND THE WHEN THE ACTIVITIES ARE GOING TO BE ACCOMPLISHED.

NOW, FOLLOWING UP ON THE PREVIOUS REVIEW OF THE CUSTA AN IMPORTANT STEP IN DEVELOPING A PLAN IS TO ASK OURSELVES SOME VERY SPECIFIC QUESTIONS ABOUT THE IMPACT OF THE AGREEMENT ON OUR INDIVIDUAL BUSINESSES AND OUR INDUSTRIES.

PROJECT THE SPECIFIC IMPACTS OF THE FREE TRADE AGREEMENT

1. TRADE BARRIER DEFINITION

IDENTIFY THE SPECIFIC IMPACTS OF PHASING OUT RESTRICTIVE TARIFFS (GREATER THAN 5%) AND OF LIBERALIZING KEY NON-TARIFF MEASURES ON YOUR BUSINESS.

. PROTECTIVE OF CANADIAN SALES: TARIFFS AND NON-TARIFF MEASURES THAT HAVE PROTECTED YOUR COMPETITIVE POSITION BY MAKING IT DIFFICULT FOR U.S. COMPETITORS TO SUCCESSFULLY ENTER THE CANADIAN MARKET.

. HINDRANCE TO EXPORTS TO THE U.S.: TARIFFS AND NON-TARIFF MEASURES THAT HAVE IMPEDED THE ABILITY TO CONDUCT BUSINESS COMPETITIVELY AND EFFICIENTLY IN THE U.S., SUCH AS A HIGH U.S. TARIFF ON PRODUCTS OR A HIGH CANADIAN TARIFF ON INPUT MATERIALS.

2. TRADE BARRIER REMOVAL

ANALYZE THE IMPACT OF REMOVING TARIFF AND NON-TARIFF BARRIERS ON YOUR BUSIENSS OPERATIONS.

. PROTECTIVE BARRIERS: QUESTIONS RELATIVE TO INCREASED COMPETITION EXPECTED FROM U.S. PRODUCTS IN THE CANADIAN MARKET.

. HAS THIS TRADE BARRIER PREVENTED U.S. COMPETITORS FROM ENTERING THE CANADIAN MARKET?

. IF SO, ARE THE U.S. COMPETITORS LIKELY TO ENTER ONCE THE TRADE BARRIER IS REMOVED?

. WHAT IS THE OVERALL IMPACT OF REMOVING THIS TRADE BARRIER? IS THE TIME FRAME FOR REMOVAL A FACTOR?

. WHAT IS YOUR POSITION IN COMPARISON TO THE U.S. COMPETITORS?

. DO YOU HAVE THE RESOURCES TO STAY COMPETITIVE?

. ARE THERE ANY MARKETS OR PRODUCTS WHICH ARE PARTICULARLY VULNERABLE?

. HINDERING BARRIERS: QUESTIONS RELATIVE TO NEW EXPORT OPPORTUNITIES IN THE U.S. AS A RESULT OF THE AGREEMENT.

. HAS THIS TRADE BARRIER PREVENTED CANADIAN COMPANIES FROM EXPORTING TO THE U.S.?

. WHAT IS THE OVERALL IMPACT OF REMOVING THIS TRADE BARRIER? IS THE TIME A KEY FACTOR FOR REMOVAL A FACTOR?

. WHICH OF YOUR PRODUCTS MIGHT BE COMPETITIVE IN THE U.S. UNDER THE AGREEMENT?

. ARE THERE INSTITUTIONAL OR DISTRIBUTION FACTORS WHICH MAKE ENTRY TO THE U.S. DIFFICULT?

3. SECONDARY EFFECTS

ASSESS THE VARIOUS INDIRECT EFFECTS OF CHANGES IN THE TRADING ENVIRONMENT WHICH COULD IMPACT ON YOUR BUSINESS OPERATIONS.

. WHAT WILL BE THE LOCAL/REGIONAL IMPACTS OF FREE TRADE? WILL SOME INDUSTRIES BOOM UNDER FREE TRADE?

- . WHAT EFFECT WILL THE AGREEMENT HAVE ON YOUR SOURCING OR BUYING PRACTICES?
- . WHAT EFFECT WILL THE AGREEMENT HAVE ON YOUR CUSTOMERS?
- . WHAT IS THE POTENTIAL FOR ADDING CANADIAN CUSTOMERS AS INPUT MATERIALS SWITCH TO U.S. SOURCES?

4. OVERALL IMPACT OF FREE TRADE

CATEGORIZE THE OVERALL IMPACT OF FREE TRADE ON YOUR BUSINESS OPERATIONS.

- . VERY POSITIVE
- . SOMEWHAT POSITIVE
- . MINIMAL
- . SOMEWHAT NEGATIVE
- . VERY NEGATIVE

THE AN ANSWER TO THESE QUESTIONS WILL RESULT IN THE DECISION TO DEVELOP AN OFFENSIVE STRATEGY, A DEFENSIVE STRATEGY OR EVEN TO EMPLOY YOUR RESOURCES ELSEWHERE. HOWEVER IT IS IMPORTANT TO NOTE THAT THE POSITIVE OR NEGATIVE IMPACTS IS ONLY RELATIVE TO THE STATUS QUO. FAILURE TO PLAN TO

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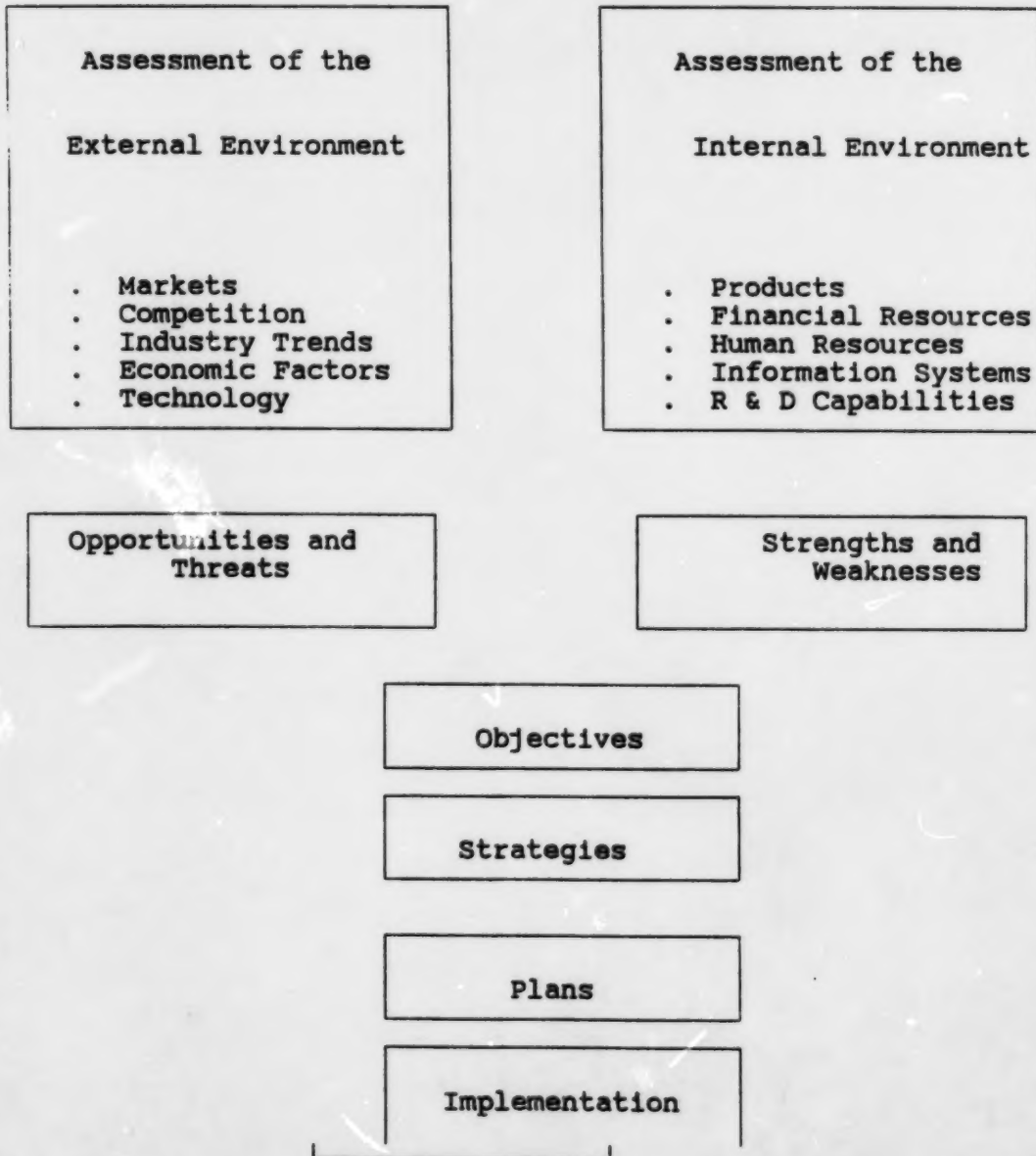
CAPITALIZE ON AN OPPORTUNITY WILL LIKELY END UP BEING AN OPPORTUNITY LOST. SIMILARLY DEVELOPING A DEFENSIVE STRATEGY MAY REVEAL OPPORTUNITIES. THE KEY IS THAT YOU CAN'T SIT BACK AND WAIT FOR THINGS TO HAPPEN AND THEN COMPLAIN THAT IT DIDN'T TURN OUT THE WAY YOU EXPECTED. FAILURE TO PLAN IS A PLAN TO FAIL.

LET US NOW TURN TO BRIEFLY DISCUSS SOME OF THE MECHANICS OF STRATEGIC PLANNING.

STRATEGIC PLANNING OBJECTIVES

- . EFFICIENT ALLOCATION OF RESOURCES
- . MAXIMIZE PROFITS/SURVIVAL
- . INCREASE FLEXIBILITY TO DEAL WITH CHANGING
CONDITIONS

KEY STEPS IN STRATEGIC PLANNING



COMPANY PERFORMANCE INVENTORY

Product Issues

- . Product Quality
 - . Product distinctiveness as against competitive substitutes
- . Price competitiveness
- . Customer loyalty to product

Employee Issues

- . Skilled labour force
- . Wage expenses relative to:
 - Canadian competition
 - U.S. competition
- . Labour/management relations
- . Worker morale

COMPANY PERFORMANCE INVENTORY

Location issues

- . Location relative to:
 - Major markets
 - Source of key inputs
 - Relative advantages over competitors

Management/Financial issues

- . Expertise of management
- . Sales and profits trends
- . Balance sheet issues:
 - Debt load
 - Debt/equity ratios
- . Availability of incentive programs/
favourable tax treatment

MARKETING PERFORMANCE INVENTORY

- . In house marketing expertise
- . Outside sources of marketing expertise
- . Comprehensive marketing strategy
- . Customer recognition of product brand
- . Customer loyalty to product
- . Established market niche

ASSESSING WEAKNESSES

- . What could you do to improve the rating of each criteria?
- . Would this change improve your overall position?
- . Do you have the resources to undertake such a change?
- . Do the projected results justify the necessary allocation of resources?

ASSESSING STRENGTHS

- . Which criteria are most significant to your business?
- . How could you best capitalize on your strengths?
- . What results would you like to achieve?
- . Do you have sufficient resources?
- . Do projected benefits justify resource allocation?
- . Do you have a definite competitive advantage?

STRATEGY ONE:

IMPROVING COMPANY PERFORMANCE

1. Reducing / streamlining operations
2. Rationalizing production
3. Move up value added chain in production
4. Re-examine input sourcing practices

STRATEGY TWO

MARKET PENETRATION

CAPITALIZING ON THE OPPORTUNITIES

DEVELOPING A STRATEGIC PLAN

SETTING YOUR OBJECTIVES

- . Exactly what must my business achieve to remain competitive and profitable in the 1990's?

LONG RANGE PLANNING OBJECTIVES

- Objectives Support the Basic Purposes and Missions of an Organization

- To be Meaningful, Objectives must pass the SMART Test:

Smart

Measurable

Attainable

Realistic

Target Dated

- Objectives must be Challenging, yet Attainable if they are to act as a Motivator

- People who are Responsible for Achieving Objectives should be involved in Setting them

- Objectives must be Consistent Between Various Parts of the Company

EXAMPLES OF CATEGORIES FOR SETTING OBJECTIVES

- . Sales
- . Profits
- . Expansion
- . Staff Quality and Motivation
- . Specialization of Product Lines

STRATEGIC PLAN CHECKLIST

- . Understandable
- . Detailed and Comprehensive
- . Measurement Mechanisms
- . Financial Projections and Budgeting
- . Plan Review Mechanism

IMPLEMENTATION

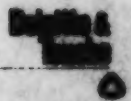
Critical Factors in Successfully Implementing a Strategic Plan

- . Commitment from the key stakeholders
- . Effective communication
- . Allocation of sufficient resources
- . Strong management of the process
- . Continual monitoring of the external and internal environments

EVALUATION OF YEAR ONE PERFORMANCE

- . Has the organization changed?
- . What is the organization doing differently?
- . Are the new methods an improvement?

- . A concise and well thought out strategic plan will set the tone defining and realizing excellence in your organization!



MAJOR PITFALLS TO AVOID IN STRATEGIC PLANNING

- . Delegating the Planning Function to a Planner
- . Top Management Spends Insufficient Time Planning
Because they are Engrossed in Current Problems
- . Developing Goals Unsuitable for Formulating Long
Range Plans
- . Failure to Assume Necessary Involvement of Major
Line Personnel in Planning
- . Failure to Create a Climate Conductive to Planning
- . Assuming Planning is Separate from the Entire
Management Process
- . Making the Planning System too Formal so that it
Lacks Flexibility
- . Failure of Top Management to Review Plans with
Departmental and Divisional Heads
- . Top Management Rejects Formal Planning Mechanism
by Making Intuitive Decisions

CONCLUSION

. **FACT:**

Free Trade will have an impact on your
business operation!

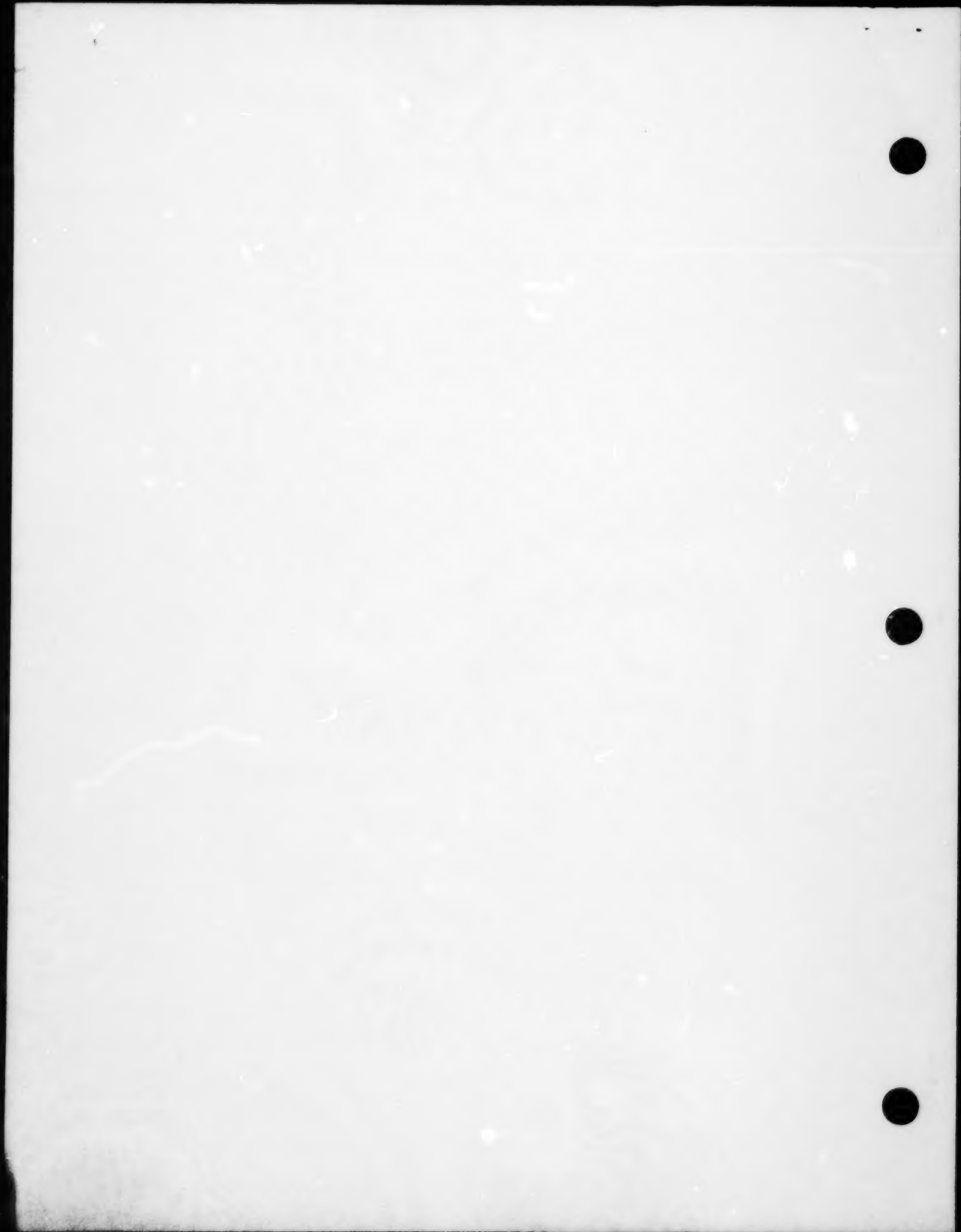
. **GOAL:**

Prosperity and survival in the 1990's

. **RESPONSE:**

Plan a strategy to position your business
to realize your goal

**THE NEXT STEP IS
UP TO YOU**



Global Warming: The Need for Objectivity.

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"There is something fascinating about science. One gets such wholesale returns of conjecture out of such trifling investment of fact." Mark Twain.

"It is a human tendency to represent as perpetual what is only frequent, or as constant what is really casual." Samuel Johnson.

Introduction:

It has become almost impossible to discuss global warming in an objective manner. Misinformation and media hypberbole have played on the fears of the public. The result is that politicians are faced with increasing pressures for action on an increasing number of problems. Clearly all of the problems are not going to be dealt with immediately or even in the short term. Obviously priorities have to be established and this is the challenge of the politician.

This paper will not attempt to present the arguments in favour of global warming and its potential impact, those have already received extensive attention. Rather, it will present the side that has not received the media attention, but is essential if governments are to make the most informed decisions possible.

It is a side that has not received adequate academic attention either because it questions prevailing wisdoms. It is difficult to obtain funding for ideas that are not considered to be 'conventional'. Applications for research funds are judged by other academics who have achieved that role by

representing the mainstream thinking. They tend, therefore to reject requests that do not fall within that framework. Similarly, the practice of peer review of articles submitted for publication has the inherent danger that research and ideas that are logical and sound but not within the current thinking are rejected.

A herd mentally has taken over in the case of global warming. Just fifteen years ago the herd was convinced that global cooling towards another ice age was occurring as temperatures declined from 1940 to 1980. Now the herd is headed in the other direction as temperatures have warmed in the 1980s, only this time the rumble of the wagon is drowning the voice of reason and logic and running roughshod over the evidence.

The truth is that science has made some very definitive predictions on very little evidence; these have then been selectively amplified by the media. I do not question the motives. I assume that they are genuinely concerned about the environmental conditions developing on our planet. However, if they intend to scare the public towards a particular perspective they play a very dangerous game, especially with climate. There are too many uncertainties and lack of knowledge about global climate to make definitive predictions, yet they are being made. The public tends to accept things as absolute, especially if they come from scientists and appear in the media. I will delineate the problems with these widely publicized views and provide some policies that would be more appropriate in light of great uncertainties.

Governments are not going to deal with all the environmental problems that confront us. They have to establish priorities and direct funding to those things that will solve the most severe and immediate

problems, with limited impact on the economic and social order. This submission is presented within the context of those realities.

The Current Situation:

The November 1989 issue of Scientific American includes a section titled "Not So Hot", in its "Science and the Citizen" section. The author begins the piece with the following statement;

"When editors and newscasters routinely bandy about the term "global warming" without bothering to explain it, then the idea could be said to have entered the body of public knowledge, accepted by most as immutable fact. Yet the public's acceptance of global warming caused by the greenhouse effect belies the fluid nature of the science. The conclusion that the buildup of carbon dioxide and other greenhouse gases might lead to catastrophic warming of the earth's climate continues to generate debate among scientists"

This is a position I have been postulating publically for the last five or six years. It is only part of the difficulty but aims at the problem of the social responsibility that scientists who go public must accept.

The recent public statements by James Hansen of the Godard Space Institute and others about the global warming of the 1980s have created a great deal of fear, particularly amongst those such as farmers who are directly dependent upon climate. Hansen's (1988) public claim that, "the global warming is now sufficiently large that we can ascribe with a high degree of confidence a cause and effect relationship to the greenhouse effect...", is unacceptable. As others have attested we simply do not know enough about natural climatic variability or its mechanisms for such distinctions and definitive conclusions to be made.

The case is not made that the warming is due to an increase in atmospheric gases. Equally, the case is not made that there is an enhanced greenhouse effect because of those gases added by human activity. More important, it masks the fact that the important change in the 1980s is not the warming but the dramatic increase in the variability of climate. Those who favour warming like to point to warmer winters, they choose to ignore the colder winters that we have also experienced. What Hansen also ignores is the degree of social responsibility that comes with public scientific statements.

Consider how Hansen's remarks were interpreted by Senator Wirth at the June 1988 Toronto Conference on the Changing Atmosphere. "According to his (Hansen) studies, we can now say, with 99% certainty, that the greenhouse effect is upon us and that such events as the North American drought are increasingly likely to occur." The greenhouse effect has, in fact, been with us since the very early stages of the evolution of the earth and its atmosphere. Where did the notion come from that it is recently upon us?

There is no argument about whether the greenhouse effect exists. The average global temperature is approximately 15°C , without the effect the temperature would be approximately -20°C^* . The real question is how much has human activity altered the natural balance thus creating an 'enhanced greenhouse effect'. Wirth's interpretation illustrates ignorance from a person who claims that he was privileged to chair the hearings of the Senate Energy and Natural Resources Committee which Hansen addressed.

Some have acknowledged the problems, but they tend not to be heard by the media, politicians or the public. Hansen claimed recently that the

* I have chosen this figure because there is even disagreement about the actual value. The range in the literature is from -22°C to -18°C .

White House had urged that he add a portion to a submission to the United States Senate on the state of the environment. He protested about political pressures and interference, drowning the fact that the addition and request were reasonable. The White House merely noted that not all scientists were in agreement with him and that there were many other factors that need to be considered in the complexity that is climate. It is the type of modification of unproven definitive statements that any reviewer could and should request. Unfortunately, we continue to see definitive and inflammatory statements about the future trends of climate being presented as absolute and inevitable.

We now have a situation in which the public believe that the global warming is going to continue; that it is going to be detrimental to everything and everyone; that all scientists agree with the predictions; that we fully understand the mechanisms that cause climate change. Where does such misinformation begin? How have things become so misinterpreted? Who or what is responsible? What are the dangers of such a situation?

S.J. Rasool correctly and boldly drew attention to "... the growing problem of how to separate good science from good fiction, especially when the press coverage picks up the latter" in a 1983 editorial in Climatic Change. His warnings need to be restated and emphasized because the hyperbole and selective approaches continue unabated. For example, in his presentation to the Toronto Conference (June, 1988) on The Changing Atmosphere, R. J. Watson presented a theme paper on atmospheric ozone. He listed three basic theories to account for decreased ozone in Antarctica since the late 1970s. These were; human activities adding chemicals; changes in circulation; and solar activity cycles. The first two were discussed at length while the third was mysteriously completely ignored.

I do not intend to be an apologist for polluters. I concede that some might attempt to use my arguments for that purpose but it is a risk that must be taken. There is a much greater danger in being wrong in the predictions because then the polluter will be given all the ammunition they seek. The risk of being wrong is even greater for political leaders.

As proof of the foregoing, notice how quickly people asked "Where is the Greenhouse Effect now?" after the cold spells of the winter of 1988/89. The cool wet summer of 1989 in eastern North America has already changed the White House perspectives and caused them to reduce the pressures for tougher environmental regulations.

Many would like to see a total and complete commitment of all our efforts to cleaning up the environment. They would like to see rapid adoption of new policies and laws directed to recovering, conserving, and preserving. They would like to see pursuit and prosecution of those who despoil our world. Unfortunately, the reality is that a majority do not want to sacrifice material things. Those with a high living standard do not want to surrender anything and the remainder aspire to improve their standard. Many long for the doomsayers to be wrong. Others live for today and do not care if we destroy things for the future. The majority realize that we have problems and that something must be done. They are willing to pay for some action to be taken but want it to be directed and limited. They also want it to start with someone else. (This is manifest in the "Not in my backyard" (N.I.M.B.Y) phenomenon). The politician is left with the dilemma of responding to the growing concern, but must spend money carefully and selectively on those problems that are considered the worst. It means that they must be reasonably sure that they are tackling the right problems in the right order.

For those who do not accept this position consider the fate of Gro Brundtland, recently Prime Minister of Norway. As chair-person of the excellent report on world environment, Our Common Future, that brought us the term "sustainable development" she did more than any other world leader to bring the environment to the forefront. In recent elections the Norwegian electors handed her government a resounding setback so that she was forced to relinquish power. Her leadership had reduced the deficit and introduced extensive, innovative, environmental legislation; unfortunately the electorate were not willing to pay the price. Politicians are naturally wary and need to be assured as much as possible that they are taking the right direction. It is facile to blame the politician when we are not willing to pay the price ourselves.

It is not possible to examine all the problems or present all the contra-positions in the debate about global climate. I will introduce some of the more important points to demonstrate that our knowledge is extremely limited, likely flawed, and unworthy of the absolute predictions being made by so many people. It is particularly disturbing that people with great influence on the public, such as David Suzuki, do not seem to be aware of the problems with the predictions of climate. They accept the information that suits their position without question. It might be good media but it certainly is not good science.

Some of the major points that need to be considered by any group attempting to understand the situation are as follows:

1. There are large areas of the globe with very few weather stations. The oceans cover 70% of the earth's surface yet there are virtually no stations. Deserts occupy 20% of the land surface, and mountains another 19%, both have very few stations. The polar regions have only recently been

explored and are great gaps in our database yet they are apparently crucial to the dynamics of the climate system. The type of data collected is usually very limited and most stations only record temperature, barometric pressure and wind.

Contrary to expectations satellites do not provide much crucial information, although they do provide wider coverage. There is also evidence that they provide incorrect information. For example, a recent study of actual ocean temperatures, using a process called ground-truthing, has shown that the satellite readings were higher than reality.*

A similar problem confronts the Canadian measurements of upper level ozone. The Canadian measurements are done by beams directed upward from the surface. Evidence suggests that they vary as a function of the amount of dust, gases and other particles, but this has not been fully understood. This problem apparently accounts for the recent dispute between Canadian and American scientists. Their scientists, who measured the ozone from U2 planes and satellites, claimed that there was no hole in the Arctic ozone while Canadian scientists argued that there was one.

It will be argued that we still have enough sample points to determine climate patterns and trends, but this is not the case. We know that different regions have different climate changes at the same time. It is incorrect to assume that a change in one area will be paralleled by similar changes in another area. This variability can be quite extreme. For example, 8400 years ago the boreal forest extended into the western Arctic Islands while southern Ontario was still either under ice or at best on its fringes.

* Most remote sensing studies have to verified to some extent on the ground, this has become known as ground-truthing.

2. Instrumental climate records rarely go back more than 100 years. There are some records over 200 years in length but they are concentrated mostly in Europe. Longer records are available but there has been little interest and therefore little research money available for developing them. This lack of interest also applies to reconstructing past climates from other sources.

The public hear reports on the radio that "this was the warmest day on record" and usually do not understand that this is only for the period of "official" record. As we reconstruct past climates from historical records, tree-rings and a variety of other sources we realize that climates have varied considerably in the past.

We have yet to fully document changes in the past, let alone determine the causes of those changes. You will be interested to learn that the Hudson's Bay Company had thermometers and barometers at Churchill, Manitoba in 1768. I have reconstructed daily weather for Churchill and York Factory from 1714 to the present using this information and weather reports from the daily journals. They indicate significant changes in the weather that occur long before any possible effects due to human activity. We must explain these natural variations before we can determine what variations are being caused by humans.

3. We do not have a paradigm, or general theory of global climate. Unlike physics with the works of Newton and Einstein, biology with Darwin's theories of evolution, or Geology with Wegener's continental drift, climatology has not achieved a synthesis of the major mechanisms of climate. During this pre-paradigm stage there is a tendency to look for one variable which controls the whole mechanism, thus we see the focus singly upon carbon dioxide, methane, El Niño and numerous others.

We do not know all the natural factors that make-up or control climate or cause its variations. We do not understand how they interact. We do not know how variables change in their importance in a dynamic system. A variable that is insignificant at one level might be crucial at a different threshold. As Bucha (1988) expresses it, "...if we want to read an anthropogenic effect we have to be able to define the background of natural processes and the way in which the global environmental system operates."

One of the most puzzling things is the view of climatologists and meteorologists about solar energy. It is still assumed that solar energy does not vary. Consider the following statement; a remarkable one to find in a scientific journal.

"'Serious' meteorologists still prefer to dismiss any claim that there is a noticeable relationship between the activity of the Sun and events on Earth. And yet, to our own surprise, we have found a highly significant correlation between the state of the atmosphere and solar activity." (Van Loon and Labitzke, 1988)

Why do the authors present such an apologia? Why is it so startling to find that changes in the sun might have significant effect upon global climate? The answer is that we continue to believe that solar output is constant and that any variations are negligible and have little effect. This is hard to understand when it has been estimated that temperature variation throughout the entire history of the earth can be accounted for by a 6% variation in solar output.

The same assumption of solar constancy has been applied to the ozone layer. It is accepted that ozone is created by photochemical interaction between ultraviolet radiation from the sun and gases in the upper atmosphere. If you assume that solar energy is constant you are left with no

choice but to conclude that any variation you measure must be caused by something coming from below. The Committee is directed to the article in the January 1988 issue of Scientific American which, in examining the Antarctic ozone hole, concedes the method of formation of ozone but never once considers solar variation as a factor to explain variation in the amount of ozone. This despite the fact that we know that the sun has been very active in the 1980s.

4. It is becoming increasingly apparent that the climate is modified by corpuscular energy (the solar wind) from the sun as well as by electromagnetic or radiative energy. Research in a variety of disciplines shows that the Canadian Indian's lore that appearance of the aurora borealis foretold climate changes has some validity. The relationship between sunspots, solar flares and the earth's magnetic field is gradually being measured and explained. None of this is included in any general circulation models of global climate currently in use.

The evidence gathered so far suggests that when the sun is very active the world is warm and when it is inactive the world is colder. A study by Bucha (1988) is one of the more recent in this area:

"Our results have shown the increase in temperature and pressure to take place in the auroral oval even in the troposphere at the time of increased corpuscular radiation indicated by geomagnetic activity and to lead to the change of the meridional flow into the zonal flow of the atmospheric circulation in the mid-latitudes on the northern hemisphere."

The results of the correlations between variations in corpuscular radiation and northern hemisphere climate were that;

"During enhanced corpuscular radiation the cyclogenesis increases and a deep low is created in the polar region. This leads

to the intensification of the zonal flow, causing a pronounced increase in temperature in Europe and eastern North America. When the corpuscular radiation displays a marked decrease, meridional flow again increases in intensity and Arctic air penetrates into Europe and North America, where this is then reflected in an abrupt drop in temperature."

Two classic examples of this pattern in history can be cited. The period from 1645 to 1715 A.D., is known as the Maunder Minimum, a reference to the lack of sunspots during the period. The same period was coincidentally one of extreme cold. For example, the Thames River had two feet of ice in 1683.

A conference on the climate of the year 1816 A.D., at the National Museum of Natural Sciences in 1988 brought together dozens of climate experts. Most came to the conference with the belief that this exceptionally cold "year with no summer" was a result of the volcanic eruption of the volcano Tambora in the preceding year. It became apparent that the cooling began about 10 years previously and the volcano happened to occur at the nadir of a 20 year colder period. This 20 years was also coincident with low sunspot activity.

Notice that I do not argue for cyclical climate due to sunspot activity, I simply point out that the coincidence between certain solar activity and temperatures on earth must be explained before we attribute the current warming only to carbon dioxide or greenhouse gases. The sun has been very active in the 1980s as reported in many scientific journals and to the public in Time magazine of July 1989.

5. The current predictions of warming in the next 40 years are based on simple linear projections of the trend of the last ten years. It is assumed that because it has warmed for the last ten years it will continue to warm. Most attribute this to increased carbon dioxide. Important facts are ignored

such as the fact that the global temperature declined between 1940 and 1980, even though carbon dioxide increased. They ignore the fact that temperature has been increasing since approximately 1760 A.D., and had been cooling for some 300 years before that. It is simply not valid to take a trend of 10 years or even 100 years out of the overall trend.

The cool period from approximately 1450 to 1850 is known as the Little Ice Age. Idso (1988) asks if the warming since 1760 is a result of the demise of the Little Ice Age or carbon dioxide warming.* The summary to his article expresses the problem succinctly.

"A comparative analysis of long-term (several-hundred-year) temperature and carbon dioxide (CO₂) trends suggests that the global warming of the past century is not due to the widely accepted CO₂ greenhouse effect but rather to the natural recovery of the Earth from the global chill of the Little Ice Age, which was both initiated and ended by some unrelated phenomenon, the latter expression of which is the very warming generally attributed to the CO₂ increase of the past century"

We need to explain changes of the past before we start attributing current changes to specific factors. The failure to put things into a philosophic and historic context is a major failure of our society not just climatologists.

6. Global Circulation Models (GCMs) are based upon our very crude understanding of the mechanics of the atmosphere. They are limited by the capacity of computers which are unable to handle all but the most simple variables. For example, the most sophisticated model cannot cope with a complete full depth ocean/atmosphere interaction. None of the models can

* Idso has been at the centre of controversy and the victim of attacks because he has dared to question the prevailing views of global warming. Some of this can be read in various articles and editorials in Climatic Change. His experiences are a measure of the narrowness and hostility that exist in the academic world. They underline why it is essential that all of the information and views be examined.

cope with any feedback that would naturally occur in the real world system. Partly because the computer capacity is inadequate, but also because we do not know what how the feedbacks would work.*

More disturbing, most models "predict" that a warming of 1° C should have occurred over the last 100 years; the actual increase has been approximately a half degree. Despite this most scientists continue to accept the "forward" prediction of global warming, while the public receive it as incontrovertible. Even one of the most confirmed Greenhouse people, Dr Stephen Schneider of the National Center for Atmospheric Research concedes that, "Most climatologists do not yet claim beyond a reasonable doubt that the observed temperature records have been caused by the greenhouse effect."

A major problem is that the models are based on the limited amount of data discussed earlier. A model is only as good as our measurements and understanding of the atmosphere. The level of accuracy is crude because models can only handle a world divided into approximately 5° squares of latitude and longitude. At this scale two squares almost cover the southern prairies and yet we know that the climate varies a great deal in this area. The Great Lakes are considered to be dry land. Even the most dedicated of modelers concedes the problems.

"These model validation studies show that, although the GCMs are the only type of model in the climate model hierarchy that can simulate climate on the regional scale, they do so not without error, particularly for the components of the hydrological cycle such as precipitation. Therefore, further improvement in the

* Dr Schlesinger informed a Conference on the Impact of climatic change in Alberta that it took 156 hours of computer time simply to have the computer move from equilibrium to equilibrium by doubling carbon dioxide alone. This is an enormous amount of computer time and yet this was with a Cray computer the most powerful available.

simulation of CO₂-induced climatic change requires the systematic analyses of the factors that contribute to the errors in the models' simulation of the present climate, and the subsequent correction of those errors." (Schlesinger, 1987, p. 42)

A study by Santer (1988) published by the Climatic Research Unit at the University of East Anglia, attempted to test the validity of the three major General Circulation Models. As he states; "It is generally accepted that current GCMs show considerable disagreement in terms of important regional and seasonal details of their control run climatologies...". In an attempt to test the validity of the models against known climatic conditions Santer tested their ability to recreate conditions for the North American - Atlantic - European region. His results showed that, "All three GCMs have large, systematic errors throughout the seasonal cycle in their simulation of AH/IL (Azores High, Icelandic Low) position and intensity, and all generate an unrealistic 'Greenland High'. These are major global pressure systems and should be reproduced accurately if the computer model is working. Clearly they are not.

The disturbing part is that these models are the ones being used to make the predictions of global warming that the world is taking for incontrovertible fact. There are five models considered to be state of the art. They are all based on the same simplistic assumptions of climate mechanisms and use essentially the same data and yet they produce totally different results in their predictions. Some will argue that they are consistent in predicting a continued global warming. Of course! They are programmed to respond to an increase in carbon dioxide with a rise in temperature. What they cannot do is simulate the reactions and feedbacks that would occur in nature.

The modelers argue that the results are qualitatively similar, overlooking the fact that the results are quantitatively dissimilar. They disagree in the degree of temperature change, but more importantly in how different areas will be affected. Precipitation predictions are more complex and therefore even more imprecise and yet precipitation is a more critical variable for agriculture, forestry and many other activities.

There is a place and a need to create models of climate. The problems arise when they are taken out of the laboratory and presented to the public as accurate predictors of future climates. I know from conversations with many government researchers using these models that they are unaware of the limitations. The difficulty is that they are the only models available and the Minister wants definitive answers.

7. We have been told that global warming is potentially catastrophic and most people have accepted that scenario. The world has been as warm in the past as the generally accepted predictions suggest and yet few have examined what happened during those times. The general answer is that only one region of the world would be seriously affected by warming and that is the western United States. Time magazine for October, 1987, acknowledges this point; their cover story concedes that Canadian agriculture could boom because of warmer climates, while the U.S. Midwest became a dust bowl. The major impact would be upon their agricultural capacity which has dominated the world in the post war period. It would aggravate their water supply problems, but those are in trouble regardless of climate change.

The reason for this pattern of warm climate impact is understood by a glance at a world map. The desert regions of the world generally lie between 15 and 30° of latitude. When the world warms this zone expands poleward, when it cools the zone narrows. The most significant place where

this has direct impact is in the western part of the United States. More recent studies for Western Canada indicate that there would be an increase in precipitation. It is true that the net effect would be about the same due to increased evapotranspiration. It is not true that there would be more droughts. Studies show that these relate to a 22 year sunspot cycle, therefore it is unlikely that they would increase in frequency.

I have been amused by scientists telling people on the Prairies that they are facing desert conditions in the next forty years. Something that occurred during a debate I had with two other scientists in Saskatoon. When I challenged one scientist to identify a region of the United States that currently has the type of climate that southern Saskatchewan would experience under the worst case scenario we were told that South Dakota was appropriate. South Dakota is one of the major agricultural regions of the world so I fail to see the problem; as did the farmers present. The real problem would be that South Dakota would have a climate similar to Arizona.

Canada, Europe, the Soviet Union and China would all benefit from a warmer world as their capacity for agriculture and other activities would be expanded. The only limit would be the northern extent of soils. There would be little or no change in the southern hemisphere as there is little land south of 40°.

It has been the history of climate change that one region gains while another loses. Unfortunately, we live in a world dominated by American science and media thus we have been convinced that warming is a negative thing. We must examine the source as well as the message.

8. There has been a great deal of attention on carbon dioxide as the greenhouse gas that is causing climate change. More recently attention has

focused on methane, but it has not caught the attention of science or the media in the same way. It is difficult to understand why water vapour is ignored. It is acknowledged that it is the major greenhouse gas; it makes up 2% of the atmospheric gases and can be as much as 4%, while carbon dioxide is only 0.035%. We know the effectiveness of water in retaining heat as we measure the temperature differences between clear or cloudy nights. We have little knowledge about the actual amount of water in the atmosphere therefore we do not know if it is increasing or decreasing. We take the usual compromise and assume it is constant.

Recent studies in Alberta indicate that trees grow more rapidly as the carbon dioxide levels rise. The global biomass would undoubtedly increase thus absorbing some of the increased carbon dioxide. There are a multitude of other feedback mechanisms other factors not being considered, however I would agree with those who advocate reductions of all the gases we are currently producing. Not just the Greenhouse gases.

9. We have very little data of the actual conditions in the different layers of the earth's atmosphere. The percentage of gases in each level, how they interact with each other, and with energy or matter passing through them, are only generally understood. We know virtually nothing about the amounts of dust in the atmosphere and again assume that the levels are relatively constant.

The concept that volcanos could affect climate has only been examined with scientific intensity since the 1970s. We have learned that many of the early assumptions about their impact were wrong. For example, we now know that latitude, time of year and the amount of sulphur are all important in the degree and extent of the climatic impact.

Beardsley (1989) identifies the problems when he writes;

As investigators refine the computer models on which global climate predictions are based, some estimates of probable warming are being lowered. Moreover, new data suggest that human activity may influence climate in ways that have previously been neglected.

Items 1 and 2 pointed out the lack of spatial and temporal data but we must also consider the depth of the atmosphere. There is not space here to consider the difficulties posed by the lack of information about the structure of the upper atmosphere and how different layers interact. It is increasingly clear that we must understand the magnetosphere and all other layers down to the surface as each has a function in climate at the surface.

10. Ocean currents, particularly those of the deep ocean, are little understood and virtually unmeasured. We believe that large amounts of heat energy can be stored for millennia but do not consider these in explaining climate variation. Extremely large polynyas, areas of upwelling of warm water, have recently been discovered in the arctic and antarctic. Some apparently can release sufficient heat to alter the global climate.

El Niño has ended and we are told about a new condition, La Niña. Both are presented to the public as something new. Both were reported by the Spanish over 400 years ago and they learned about them from the Incas. Questions asked by the public told me that they believed that this was some new phenomenon that was a result of global warming. Surface ocean currents are generated by the wind, therefore they are initially an effect not a cause of climate change as many, including Environment Canada, have argued. It is true that they in turn affect the climate in their latitudes but it is incorrect to say that they are the cause of climate changes elsewhere. Recent research indicates that they vary as the quasi-biennial oscillation

(QBO) changes which in turn varies with changes in the upper atmosphere.* These are the "surprising" correlations reported by Van Loon and Labitzke above. Tinsley (1988) found similar correlations between the QBO and the latitude of storm tracks in the North Atlantic.

11. Finally, most of the experts who now are convinced that we are headed to heated disaster were of a different opinion just 12 years ago. A National Defense University (NDU) study in 1978 asked 28 experts what they understood would happen to global climate in the next 40 years. Only 5 believed that there would be a global warming. At that time everybody was talking about the coming ice age. Deep snow in Buffalo and other bad weather conditions triggered the exodus to the Sunbelt.

A book was published in 1976 by Lowell Ponte titled The Cooling. A foreword by Senator Claiborne Pell states that Ponte's thesis is based on, "...the natural cooling of our planet's climate since 1945...". In the preface Professor Reid Bryson, Climatologist and Director of the Institute for Environmental Studies at the University of Wisconsin writes that, "One would think there might be consensus about what data there is - but there is not. There is no agreement on the causes of climatic change...There is certainly no agreement about what the climate will do in the next century..." I suggest that the situation is not much better today. The interesting thing about Ponte's thesis is that he coins the word "climatocracy". It referred to the ability of nations to produce food and the impact of cooling on the ability of nations to produce foodstuffs. Government agencies in the United States did similar studies.

* The quasi-biennial oscillation is a shift from a west to an east phase and return of stratospheric winds in the tropics.

Now we are off in the other direction with precious little more information, but much greater public hysteria and misinformation rushing us to judgement. It will be difficult to remain calm and assess the situation. Many will argue that we cannot risk delay, that we cannot use the planet as a laboratory. I agree, but with limited willingness to pay for the cleanup and the need to be fair to underdeveloped countries we have to make the most informed and logical decisions possible. This will not be achieved without understanding the situation as it exists. It must include the scientific facts, some level of understanding of the natural mechanisms, and a balance between the various environmental problems that confront us.

I emphasize once again that I do not condone pollution of any sort. I am a firm advocate of the move to reduction in any uses or demands we place on our environment. We must spurn the concept of appeasement and take remedial measures to offset damage already done. However, we must ensure that science does not abandon its principles. We must ensure that we make the right decisions, as much as is humanly possible. We must also acknowledge the reality of human nature that says it wants to change the situation but is not willing to pay the price.

Problems and Alternatives:

Sir Edward Bullard has said that there are no specialists of earth, we all dig our specialized holes and sit in them. One of the great dangers of specialization is that you tend to lose sight of the whole picture. The plethora of data and the jargon in each specialization makes it increasingly difficult to read and understand in other disciplines. Most climatologists do not read the journals of solar physics or any other subject. They usually only

read those articles that directly relate to their own special area of interests even in their own journals.

They tend to be unaware of the studies of the impact of climate change or how various segments of the community are affected by climate. They are even less aware of the impact of public statements made by climatologists. For example, a measure of the concern was demonstrated in the Saskatoon debate that I referred to earlier which attracted 650 farmers from up to 300 kms away.

I would like to say that the atmosphere is the most severe and immediate problem and that all the monies should be directed to climate research, but I do not believe that this is accurate. There are atmospheric pollution problems and they likely will get progressively worse, however, the atmosphere is volatile and dynamic and would generally respond much quicker to remedial action than a problem such as toxicity in our water or soil.

A greater climate concern for Canada would be a cooler world. We operate at the northern limit of sedentary agriculture and could not adjust to cooler conditions very easily. For example a half degree decline in Manitoba's average annual temperature would eliminate corn and threaten sunflowers as crops. A year like 1816 would be devastating for the northern hemisphere, but especially for Canada.

We should establish a policy that prepares for current or cooler conditions to occur. Warmer conditions would require very little adjustment, as Louise Arthur outlines in her study on the impact of global warming on Prairie agriculture. If the climate cools and we have prepared then we will be able to adjust. It is not a 'no lose' strategy, but it is better than preparing for warmer conditions.

I believe that the single largest problem facing the world is soil erosion. This is followed by toxicity in our water and then toxicity in our soil.* If we deal with these problems, that we know about with some degree of certainty, we would achieve the added benefit of cleaning up much of the atmospheric problem.

Soil erosion and alkalinity buildup have been the problems that have undermined most agricultural based societies in the past. We are apparently no different. We need to understand what makes us continue to destroy the source of our sustenance. Plato wrote of the erosion that followed the cutting down of the forests; "...what is left now is, so to say, the skeleton of a body wasted by disease; the rich, soft soil has been carried off and only the bare framework of the district left." He elaborated on this as it affected water;

"...the soil got the benefit of the yearly "water from Zeus," which was not lost, as it is today, by running off a barren ground to the sea; a plentiful supply of it was received into the soil and stored up in the layers of nonporous potter's clay. Thus the moisture absorbed in the higher regions percolated to the hollows and so all quarters were lavishly provided with springs and rivers."

I can provide endless quotations including those of Alexander Mackenzie or John Palliser who noted the erosion and sediment problems of prairie lakes. The point is that we have known of the problems but fail to do anything to resolve them. For example, in some ways PFRA has forgotten its mandate, etched out by the droughts and conditions of the 1930s. This type failure is at the basis of my recommendations.

* Note that there is confusion over the term toxicity. Many think that I am talking about the chemicals in our ecosystem. I am specifically referring to those chemicals that are poisonous to ourselves and most other animals, for example dioxin.

We have to dispel the myth of the noble savage. The incorrect 19th century notion that primitive peoples have done what is right by the environment must be removed. If you study these societies you discover that man has always used, abused, and polluted his environment and then starved or migrated to new areas when its carrying capacity was reduced. We continue to starve in many parts of the world, the difference now is that we have little potential for migration; there are many more of us to destroy the environment; and technology allows us to do the job with greater efficiency.

Once we dispel this myth we have a chance to establish policies that take the true nature of humans into account. It is not innate in us to do what is right by the environment. It is essential to establish policy that directs behaviour; this must be primarily positive but should include retribution for those who do not follow the regulations.

The major vehicle for change must be the incentive of the tax structure. I did not believe that a government was serious about cleaning up the environment as long as leaded fuel costs more than unleaded. All it needed was a stroke of the tax pen to change the pattern of use. Those with cars burning leaded fuel could have been given tax relief if they traded on a new unleaded burning car.

We have not examined or exploited the enormous potential of the tax structure to direct environmental policy. I have no expertise in this area, but clearly it is the instrument that should be used most. For example, the individual farmer would not drain potholes if there was a reward in not doing so. A citizen would trade in an old pollution producing, energy inefficient vehicle if tax incentives for the price difference were introduced. It is a concept that must be introduced at the international level to offset the current policies of the General Agreement on Trade and Tariffs

and the Free Trade Agreement that might lead to continued pollution of our global environment.

I believe that private industry is the most efficient vehicle to resolve the environmental problems. I do not believe that they have a social conscious. Rather, they will respond to profit potential; they have never pretended otherwise. It is up to government to make it profitable to clean-up the environment, reduce the use of new resources, and practice recycling.

Using that same philosophy, governments of the past have used cash prizes as a method for encouraging solution of specific problems. Government should examine the possibility of offering rewards, beyond those of the marketplace, for those who solve defined problems. We have not tapped into the potential of individuals to solve some of our problems.

Finally, I believe that government should dramatically reduce its involvement in research. Government should concern itself with collecting data, monitoring conditions and ensuring that regulations are followed. The data gathered should be made available to anyone who needs it, at cost if necessary. The research currently being done by government agencies should be directed towards private operations by the new tax structure and carried out under contract where necessary.

From 1940 to 1980 the world saw generally good conditions in the grain growing regions of the world. New technology, better seeds and increasing use of fertilizers led to increased yields and expanding economies. The global war was over and economies were growing in many parts of the world. In 1976 the climate started to change, with increasing fluctuations and unpredictable conditions. This was aggravated by the return of drought conditions around 1980 or 1981, depending on the region.

At the same time legitimate, growing, public concerns about the environment were placing increasing pressure on politicians. Each new issue led to demands for action as more and more problems were uncovered. We still have not identified the full extent of some of these problems. Many are hidden, such as toxicity in the groundwater, others are slow insidious time bombs such as the increasing alkalinity and toxicity in our soils.

Some issues have been identified with a degree of certainty, others have not. Among the latter is the issue of global warming. The proponents have raised the pressure by arguing that we cannot delay, that the rate of collapse is such that we must make decisions now or it will be too late. There should be no rush to judgement. Even if we accept the arguments that global warming is a reality and potentially a serious problem, recent revisions of the timetable of warming suggests serious thresholds will not be reached for the next 50 to 70 years. Consider what has happened in the last 70 years and then think what changes will occur in the future. I have always held that problems are only problems if you are not aware of them. Once you are aware you can start to define the problem and take remedial action.

It is essential to recognize that atmospheric problems will, for the most part, respond relatively quickly to changes in our activities. The problems of soil erosion and toxicity will take much longer and need greater effort and must have priority. Fortunately, by dealing with these problems we will also alter many of the conditions that can cause atmospheric decline.

Water: The Resource of the 21st Century.
Dr. Timothy Ball, University of Winnipeg, Manitoba.

Mackenzie King is reported to have said that Canada's problem is too much geography and not enough history. I do not agree with this in a literal sense. We have lots of history the problem is that we do not know, or attempt to learn, enough about it. I think that academics have also made the mistake of separating the two areas. I see geography as the stage and history as the play that occurs on that stage. It is wrong to separate the two because history is then played out in a vacuum.

We are led to believe that historic events happen without reason or catalyst. Nothing could be further from the truth. Similarly we must dispel the myth that we do not learn from history. The people learn from history because they always pay the price. The leaders do not learn from history. The people make their mistake in tolerating new leaders who tell us that they will do things differently or believing leaders who claim to understand. Nowhere is this more dangerous than in the area of environment and resources.

The purpose of this presentation is to examine water in a historic and geographic context. This is the most effective way to grasp the importance of this resource. It is also the best way to understand what has happened in the past and what will likely happen in the future as the resource is placed under increasing pressure. A major part of the pressure will be created by the Free Trade Agreement, an event that will underline the differences in philosophy and objective of the two nations. Of course the resource is already under pressure from overuse, misuse and abuse. It will not get any easier in the future. Canadians need to be informed about the situation regarding this most important of all resources.

Some years ago Maclean's Magazine held a contest to complete the following phrase; "As Canadian as....". The second prize winner suggested, "As Canadian as Unemployment Insurance". The winner wrote, "As Canadian as it is possible to be under the circumstances". I think that the result says a great deal about our perceptions of ourselves and our country.

Joseph Colen, a Chief Factor for the Hudson's Bay Company at Churchill, Manitoba, would not have any problem with accepting the circumstances that this incredible country of our's imposes. By strict definition Colen was not a Canadian since he was in the country at the end of the 18th and beginning of the 19th century, long before the Dominion was born. In my mind he epitomizes what a good Canadian should be because of his knowledge, love and concern for the land and the environment.

I would like to dedicate my presentation to Joseph Colen and propose to you that he was possibly the first environmentalist in the country, certainly in Western Canada and the Arctic. He was, like all pioneers of new ideas, condemned for his views. Indeed, he had the singular distinction of being fired by the Hudson's Bay Company for his beliefs.* He was writing to London in the 1790s complaining of the effects of human activities on the wildlife and environment. For example, he noted that trees were being cut down at Churchill at a great rate and since they grew very slowly none would be available for future generations unless replanting was performed. Similarly he advised that the decline in the number of furs being taken was due to overtrapping. He had the audacity to suggest that these regions should be left alone to allow stocks to replenish themselves. Of course, these ideas are alien to many even today; in Colen's time they were considered

* The correct spelling is as shown. It is the Hudson's Bay Company, but the large body of water from which they took their name is Hudson Bay.

ludicrous. The Company accused him of making excuses for bad management and released him from their employ.

There are very few records in the world which have such extensive and detailed coverage of the environment. The Company and its employees depended upon the land for their commerce and their survival, thus they were more conscious than others. Their records offer a unique opportunity because there are no places on earth where we have such detailed description of the environmental conditions and the activities of Europeans as they intruded into what was essentially a virgin land. In Europe it is virtually impossible to separate the human or cultural landscape from the natural landscape. The degree of degradation of the environment today makes it imperative that we do this if we are to measure, understand and alleviate the impact. This is particularly true of water, but also applies to climate as we try to determine how much of climate variation is due to natural causes and how much to human actions.

Some of the best comments on Canadian climate are found in these marvelous journals. For example, we can all relate to Joseph Colen's entry on a bitterly cold day in February in the 1790s: "As cold as ever I knew". Or consider what I believe is the best exclamation mark in Canadian literature. James Isham, writing in his journal in the 1740s noted that it was the first hot and sultry day of the summer and that, "...the plague of Egypt is upon us." This is immediately followed by a mosquito that has been crushed into the page.

An early example of failing to understand how environmental mechanisms determine water supply occurred at Churchill in the middle of the 18th century. Samuel Hearne, whose expeditions of discovery to the Arctic coast in the region of the Coppermine River are remarkable, was

required to live in Fort Prince of Wales. This stone fort was not a desirable place in which to live. Hearne found it so cold and uncomfortable that when he returned from England, after having been captured and released by the French Admiral La Perouse, he brought a prefabricated house with him. This he considered preferable to living in the fort even though it was only made reasonably warm and comfortable by allowing four inches of ice to build up on the inside walls.

When the fort was complete they moved in and the journals note that they were very pleased because there was a well. Their delight was short lived for within two years the well dried up. They had to return to the old practice of hauling water in barrels from nearby lakes by oxcart. The reason the well dried up is unusual for us, but easily understood in the context of the subarctic ecology. They had dug down to the permafrost and built the walls up from that level. In doing so they ensured that the water that flowed in the thawed out portion of the soil in the summer time could only flow from that area within the walls. Once this had been expended the well ran dry.

We make a similar mistake when we look at the north and assume that it has much water that is easily accessed. Derrick Sewell referred to this as the myth of superabundance. The arctic and subarctic are cold deserts and as you move north the degree of aridity increases until the pole which is one of the driest places on earth.

Similar misconceptions abound for the prairies. It has been suggested that we are still victims of the overselling of the region as a paradise of unlimited potential. The truth is it is a difficult place with unforgiving climate and great variation of conditions. There are unconfirmed reports of people in Europe being given pamphlets stating that it was possible to grow

bananas in the southern prairies. I think there was a typographical error, it should have read "You can go bananas in the prairies". In this land of harsh conditions water is always important especially in the years of drought.

For some reason we have not accepted that droughts occur on a regular basis. That they occurred long before Europeans came to the area. The following quote comes from Peter Fidler's General Report of the Red River District for 1819.

The spring months have sometimes storms of wind and thunder even so early as March within these last years the Climate seems to be greatly changed the summers so backward with very little rain and even snow in winter much less than usual and the ground parched up that all summer have entirely dried up, for these several years loaded craft could ascend up as high as the Elbow or Carlton House but these last 3 summers it was necessary to convey all the goods from the Forks by land in Carts... Hudson's Bay Company Archives, B22/e/1, 6.

The similarities between these comments and the conditions of the drought that beset the Prairies last summer cannot be ignored. Drought has always been part of the climatic conditions and the historical record indicate that there have been much greater extremes in the past.

Those who believe that the world is going to continue getting warmer under the incorrectly termed greenhouse effect argue that droughts will increase. This is not the case as the droughts are not a function of warmer or cooler conditions but rather of patterns of weather controlled by solar cycles. What is especially frustrating is that we have been told virtually from the beginning by early European observers about the limitations of the environment. Typically, we have not paid heed.

(I must note that if any other country had a treasure comparable to the over 100 tons of paper and artifacts that constitute the Hudson's Bay

Company Archives they would be housed in a building that would have elements of a shrine. Possibly we are not 'old' enough to recognize the value of history and documents in understanding our national identity. If this was true in the past I believe that it is, thankfully, becoming less true. Certainly most Canadians are unaware of this treasure trove.)

One of the early observers was John Palliser, the son of landed Irish gentry who had visited what is now western Canada in the middle of the 19th century. He fell in love with the harsh landscape and rugged beauty so that he wished to return. Unfortunately the family fortune had disappeared during his first visit and he had to sign up as leader of a government scientific expedition in order to afford a return. In 1857 he set out to record the potential of the region for development, particularly agricultural settlement. His observations, commentary and advice are perceptive and accurate.

As with most people who wrote and are oft quoted he is accused of saying things he did not say or he is accused of not saying something when he did. Very rarely have people read the original work thus we end up with what I describe as 'carping on carping'.

John Palliser is accused of saying that you should not farm the treeless zone south of Regina. People incorrectly define this region formed by lines from southwest encompassing the southwest corner of Saskatchewan and the southeast corner of Alberta as the Palliser Triangle. The true triangle runs from the southwest corner of Manitoba up to Saskatoon and down to Calgary. He noted that you can farm the region but you must do so with great care because it is the northern extension of the Great American desert and is subject to periodic drought. He noted that it is a region of low precipitation and humidity; the latter something that the experts did not consider in last year's drought. (In 1988 Southern Manitoba

had several days when the humidity level was 13% or lower. This compares with the Sahara Desert that has an average level of 19%.) We paid no heed. The lessons were forgotten as were the lessons of the 1930s. We blunder forward ignoring the geographic realities.

One thing that Palliser wrote that no one gives him credit for, is that the Red River Valley was not suitable for agriculture. He reasoned that the soil was too heavy and the snowmelt did not drain quickly enough in the spring to allow a crop to be grown in most years. He has been proven wrong because of the steel plough and extensive digging of drainage ditches. The Valley is probably one of the largest, most densely drained agricultural regions in the world.

Some comments from diaries of Palliser's time give us an indication of the conditions. On May 24, 1803, Alexander Henry set out from the Red River settlement heading west. He notes, "Set off for Portage la Prairie. We found much water on the plains. Mosquitoes by the millions." A week later he writes, "Too much water on the plains for our horses to proceed." These comments are not extraordinary. The Reverend Cochrane relates the difficulties he experienced travelling from Winnipeg south to Pembina in 1844. Travelling by oxen he spent much of the time lying horizontally on the creatures back as it waded through deep water.

Most people are familiar with the 1950 flood that caused so much destruction in the Red River Valley. Few know about the flood of 1826 that was three times larger than that of 1950. There are unsubstantiated reports that the flood of 1776 was even worse. Today Winnipeggers' do not think about floods because the ditch dug around the city protects them from all but the largest floods. An 1826 flood would not be contained.

Cedar Lake, approximately 200 kms to the north of Winnipeg, has been enlarged by the construction of the hydroelectric dam at Little Grand Rapids. Most years the engineers have to get the forebay dredged of large volumes of silt. Alexander Mackenzie warned them of the problem when he was in the area in the 1780s. He noted that Cedar Lake was filling with silt so rapidly that it would become a forest within 100 years. The process has been delayed because the dam created a larger lake but it did not slow the silting. Mackenzie understood the importance of rivers better than most. He would know why all major cities in Canada are built on lakes or rivers. Regina being the one exception.

The boundary between Canada and the United States generally cuts across natural physical regions. The Rockies and the Great Plains are divided in the west, while the Great Lakes and the Atlantic regions are separated in the east. We are aware of this when we consider the affiliation between communities. For example, Winnipeg has more in common with Minneapolis than Toronto. However, there are physical boundaries that clearly separate the two countries. These are the divides or heights of land separating regions whose rivers drain into different oceans.

The Hudson's Bay Company was granted all the land that is drained by rivers flowing into Hudson Bay. As a result Canada and the United States tend to be divided by those rivers that flow north into the Arctic from those that flow south to the Caribbean and Atlantic. Ultimately this division could put the greatest pressure on our continued sovereignty.

If you draw a line down the centre of the North American continent running approximately through Winnipeg you generally have more than 500 mm (20") of precipitation to the east and less than that to the west. Canada and the United States wrote their constitutions and laws in the east where

there was adequate water. Both based their water laws on the Riparian Doctrine of British law. Very briefly, in this system the property owner who has water flowing through is responsible for passing a minimum flow of clear, pristine quality to those downstream. Also, by Prescriptive Rights people who do not have water are required by law to be allowed access.

As the nations expanded west they moved into the regions of lower precipitation. This was not a great problem in Canada because lower temperatures meant lower evaporation rates which reduced the impact on settlers, except in years of severe drought. However, in the United States it meant that they moved into progressively more arid lands that were harsh and arid even in normal years. Typically with water in shorter supply they changed to a different philosophy and law, namely the Appropriative Doctrine.

In this system the property owner who first uses the water can block all flow to a neighbour if the neighbour is not making prior use of the water. Thus it is known as prior rights. Similarly, any water passed on can be polluted and it is the responsibility of the downstream user to clean it up. This system has also been described as "Use it or Lose". If you don't use the water flowing through your property and the downstream user does you forego your claims to that water. It results in the massive 'pork barrel' projects developed by each state of the union to ensure that they do not lose their water. There is no equivalent to Prescriptive Rights thus those with no water simply go without or purchase it.

A recent article in the Wall Street Journal reported that those few eastern states which had retained Riparian Rights were changing to Prior Rights as demand increased and pollution reduced supply. The philosophical differences between the laws of the two countries raise serious questions

about the impact of the Free Trade Agreement. How will the laws that are so fundamentally different be integrated? How will philosophies that are so different be reconciled?

We must resist the pressures to change to an Appropriative Doctrine which will increase as the demands for water increase and the supply decreases. The following comments are for Canada, but they also apply to the United States except that everything, except supply, is multiplied by a factor of ten. Supply is, of course, a problem in the United States even now, without any additional pressures such as warmer global climate.

Changes in demand and supply will occur in the east and the west but for different reasons. Demands in the west are increasing in all sectors but especially for power supply and irrigation. The volumes of water required for these uses mean that there will be a greater percentage demand in the west. The supply is being decreased by changing the environment, for example draining sloughs, clearing land, or by pollution of surface and groundwater.

In the east the demand will increase primarily for urban and industrial uses. Supplies are diminished primarily by pollution. It is simple to say that cessation of pollution will solve the problem, but it is more serious than that. The levels of toxicity in surface and groundwater are extremely high and increasing. Much of this will remain in the ground for many years and at present we have no way of cleaning it up. In fact the extent of the problem has not been defined although it is clear that it is very widespread.

There has been ongoing discussion in the professional literature about making water a commodity and there is little doubt that it will come about. This means that water will have a unit price like oil and will trade

on open markets. It will, undoubtedly, reduce the wasteful uses of water, but will have unpredictable impacts on the marketplace. At present water is provided virtually free by most municipalities to industry and private citizens. In England Margaret Thatcher has already moved to privatization of municipal water, despite widespread opposition and according to opinion polls public disapproval.

As a commodity the price will increase which will result in a reduction in use and ultimately cleaner water. However, it will also mean that water is covered by the Free Trade Agreement and can be exported. Although the government has said that there will be no major diversions of water allowed they have not defined that statement. It is generally understood to mean that rivers or streams will not be diverted. It does not preclude the construction of pipelines, which are also coincidentally covered by the Agreement.

As with everything we do with water we are faced with paradoxical situations. We use it to baptize, but also to carry away sewage. It is of religious significance to so many societies, such as the Ganges river for the Hindus, yet it is polluted and abused. We call it planet earth, but 70% of its surface is covered by water and nothing could exist without that water. Water is unlike any other resource there is a morality to it as the few litres you need to survive are your human right. Anything beyond this amount is your social right. Perhaps these complexities are why we are ignoring the growing problems and potential conflicts. Canada, with approximately 25% of the world's freshwater, will take the lead and establish practices appropriate to the importance of the resource.

Hopefully we will pay heed to the information from the past. Joseph Colen recognized our dependance upon the natural environment. He

understood that it was a precious heritage that made this a great country,
but only if it was understood and protected.

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FARM MANAGEMENT SERVICES

(QUEBEC'S EXPERIENCE)

by

André D. Beaudoin

March 1988

Hello Everybody:

I am particularly happy to be able to talk to you about Québec's experience with SGAS (syndicats de gestion agricole : farm management unions) during this Conference on Gérer l'avenir (Managing the Future).

To get this overview off to a good start, I think it would be helpful to outline the history of the SGA system. Therefore, I shall try first of all to present the events in chronological order, place them in their proper context, and also indicate, whenever possible, the direction in which they were heading. This way, I believe, you will be more likely to understand Québec's experience.

Secondly, I shall tackle the mechanics of the SGA operation, such as structure, membership, ideology, and tools used by the system. Thirdly and lastly, we will look at the problems encountered, the results obtained, and outlook for the future.

To begin, then, let us go back to the history. I would like to make it clear from the very beginning that I am not a historian by profession. Not only that, despite the youthful history of this system in Québec, I have to admit I have only been part of it since 1980.

Whenever we attempt to talk about the origins and development of farm management unions, we have to present two histories: one ancient, the other recent. Not unlike the history of humanity, there is a prehistory and a modern history. The prehistory represents the period before 1978; the modern history covers the period from 1978 to the present. I am not implying that the province's first SGA, the Iberville-Missisquoi SGA, is a fossil. Nevertheless, the characteristics of the period before 1978 differ distinctly from those after 1978.

PREHISTORY OF THE SGAs

We did not have to carry out an archaeological excavation to find the article in the program of the Minister of Agriculture, Mr. Perron, which offered to contribute 50 percent of the salary of an agriculturist hired by a group of farmers to manage their farms. That was in 1929.

It is not very clear why, but it seems that, between then and the beginning of the 60s, very little was accomplished in the farm management accounting sector, where Québec was lagging far behind.

To remedy this, during the 60s, a committee, composed of the Union catholique des cultivateurs (Catholic Farmers Union), which was the equivalent of the UPA (Union des producteurs agricoles : Union of Farm Producers) at the time, the Québec Department of Agriculture, and the Université Laval, was given the mandate to prepare a development plan for farm management in Québec. We should mention that, during this period, Québec agriculture was undergoing a long crisis which brought about a considerable decrease in the number of farms and a changeover from subsistence farming to market production. In both word and deed, then, the farmer became an agricultural producer; his farm was transformed into a real enterprise.

The joint committee handed in its report, and as a result of its recommendations, several experiments in accounting and farm management were conducted. The best-known of these most likely is the experiment of the GERA (groupes d'étude en rentabilité agricole : task forces on farm profitability). These groups, supervised by the Department of Agriculture's agriculturists, produced the first group analyses and a central data bank (CIAGA). The GERA period saw the introduction of accounting tools specific to agriculture. You just have to remember the yellow notebook, and a little later, the CANFARM experiment.

Some valuable lessons were learned from these experiments, several of which definitely prepared the way for the advent of management unions:

- 1 - the importance of follow-ups for farmers;
- 2 - the capacity and need of farmers to understand the tools provided;
- 3 - the need to replace answers that are too general by advice that is more specialized and adapted to the situation of each farmer;
- 4 - the need to make methods of comparing farms more systematic;
- 5 - the difficulty of reconciling the dual function of the Department's agriculturists as government employees and farmers' consultants.

Let us go back to that great farm management development plan. The first step of the plan was to provide for the establishment of the GERA, to be followed by the formation of management groups. Thirdly, the committee's report provided for the establishment of an independent union whose powers would include hiring, for the exclusive service of its members, an agriculturist who had specialized in farm management.

In 1968, a group of farmers from Iberville and Missisquoi Counties decided to get ahead of the plan devised by founding the first management union, on a 5-year pilot basis. In 1978, when the experiment proved to be conclusive, the Department of Agriculture decided to include assistance for management unions in its programs.

For 10 years, from 1968 to 1978, the Iberville-Missisquoi SGA was the only SGA experiment. There were indeed in certain areas a few attempts to form other groups. However, lack of support, when it was not downright hostility on the part of certain communities, nipped these efforts in the bud.

During this time, the SGAIM members, on the basis of their own experience, were polishing up the SGA concept. Their merit is without a doubt that they lasted, in spite of their isolation, in spite of local skepticism. It is also that they studied their experiment in depth, in the light of what they had accomplished, their successes and their failures, and then managed to extract from it the basic points.

Eventually, the SGAIM members believed strongly enough in their system to deliver it to the farmers. They started to talk, and people began to listen.

Just a few more words about the period before 1978. During this time, the SGAIM had three consultants. At one point, however, the union noticed that there was a shortage on the job market of the kind of professional they were looking for. So, the members presented their complaints to those in charge of the Department of Rural Economy at the Université Laval. A little later, the training programs were modified, and a new area of study made its appearance-- agricultural economics. Subsequently, the new program would become an indispensable source of young agriculturists better prepared to meet the needs of the growing SGAs.

In the middle of the 70s, a young research team was formed at the Université: l'équipe Agri-Gestion Laval (the Laval Agri-Management Team). These young researchers wanted to take their laboratory out of the Université and conduct their experiments on real farms. They found that the SGAIM was a medium conducive and open to experimentation with management tools of a new kind. What is more, and it should be stressed here, these researchers, through their teaching, had a strong influence on a whole generation of agriculturists with regard to the approach to be adopted in advising farmers, an approach founded essentially on respect for the farmer and his objectives, and on confidence in his ability to learn and understand seemingly complex concepts and tools. They certainly helped to nurture the SGA project.

This was also the time when connections began to form with the UPA. Service contracts, affiliations, use of SGA members' figures for information on production costs -- all these activities reflected the role the SGA system was playing in the development of agricultural unionism.

Before examining the modern history of the SGAs, let us look at the legacy left by the period before 1978:

- 1° the need for farmers to control the development of their management tools;

- 2° 10 years of in-depth, conclusive, and reassuring experimenting with the SGA system;
- 3° a university capable of training professionals who wished to specialize in management;
- 4° demonstration of SGA and UPA common interests.

MODERN HISTORY OF THE SGAs (AFTER 1978)

Just at the time the SGAIM members decided to go on a mission to spread the SGA gospel, the agricultural class, it appears, was ready to receive the message.

The 70s had been characterized by heavy growth of investment in agriculture, galloping inflation, and specialized businesses. The development in maximum amounts which could be borrowed at the Board alone illustrates to what degree capital had become important for our agricultural enterprises. The growth in investment power provoked both reactions of insecurity with regard to developments of which the outcome seemed uncertain, and reactions of fear of not being able to keep up with them.

The SGA system seemed to many to be an original and adequate response to the current trends toward the control of agriculture by those who practise it and the need to bring organizations back to a more human dimension.

Also, there was nothing on the public or private service market to meet integrated individual needs, either of people or of businesses.

The ground was ready, therefore, and the seed was good. The second SGA was founded in May 1978, the Nicolet-Yamaska SGA. Now there were two; reproduction was possible.

Through a steady crisscross of telephone calls, appointments, and social evenings combined with meetings, the system spread like wildfire throughout every region in Québec. Five new SGAs appeared in 1979, 15 in 1980, and today there are 43 with a membership of 2,000 farmers.

As soon as the SGAs began to multiply, they felt the need to consolidate. This began first of all with informal meetings between the elected officials and consultants for the purpose of exchanging ideas, information, and working methods. The priority at the time was finding a way to meet the need for information, which had been expressed just about everywhere. Furthermore, it was because of the association of the first two SGAs that the first information bulletin on the SGAs was published.

Here is an example of why the SGAs at that time needed to consolidate. The first threat to the development of the SGAs appeared in the spring of 1980, when the QDAFF wanted to limit the number of new SGAs eligible for the SGA assistance program. Meetings, telephone conferences, and briefs followed. The whole weight of the combined SGAs had to be put on the scales to convince the Minister to subsidize the 15 SGAs ready to start up.

Therefore, as the result of a need felt from the very beginning, and at the end of a slow process, the Fédération des syndicats de gestion was founded in April 1982.

A slow process indeed, because it cannot be said that founding the Fédération was easy to do. At the outset, it had to confront the fear of local unions that they would lose their independence, and also lose the treasured feeling they had of owning a system whose machinery they alone could control. However, the process was democratic, and it won over the unions as a whole. The few SGAs which hesitated in the beginning soon understood that their interests would be better served from within than without.

The intense growth spurt experienced by the SGA system since 1978 produced increasing pressure on the demand for agriculturists who had specialized in management. Fortunately, this coincided with the arrival of a large number of graduates on the job market. These young people, often from the city,

were enchanted by the SGA system -- small in size, leaving a lot of room for initiative, in the private atmosphere of a farm and in a rural environment.

They took the job, not because of the work, but because they wanted to realize a project: the SGA project. They chose to become involved in a SGA in order to realize their ideal of a new relationship between the professional agriculturist and the professional farmer. This relationship, later described as a partnership, was based on respect and mutual trust.

We should mention here the role of summer training sessions instituted as of 1979. The aim was to complement the training of future consultants, and the sessions certainly contributed to creating and prolonging the feeling of belonging experienced by each with regard to the SGA project.

The SGA system allowed those who had committed themselves to it a lot of room for creativity. And they used it. The ensuing wave of creativity produced working tools SGA-style: accounting, group analysis audited and corrected, etc. Even data processing, in the SGA context, took on an original dimension.

There is still a lot to be said about this more recent period in SGA history, but it is still too early to single out the essential points of the experience clearly. The important thing to come out of the SGA experience since its beginnings is certainly what Daniel Rivet has called the SGA ideology:

- 1° a firm belief in unions, contained in the maxim "S'unir pour s'aider" (Working together to help one another);
- 2° development, independence of the farmer;
- 3° a project centred on management;
- 4° a partner relationship between consultants and farmers.

I have now reached the second part of my overview; that is, the part which deals with the operation, structure, etc. Here, I have decided to provide you with a kind of summary, technical rather than literary.

THE QUEBEC FARM MANAGEMENT UNIONS REPRESENT PRIMARILY:

- 43 unions situated in all the regions of Québec
- 2,000 farms
- Total assets of \$1.2 billion
- Gross income of \$340 million
- 180,000 hectares under cultivation
- 5,700 jobs (base: 40 hours/week)

THE SGA IS:

1) An independent organization,

legally incorporated, with a charter, by-laws, through a democratic decision-making process.

2) A structure,

which groups together 30 to 80 member farmers from one or several production sectors. The members elect a board of directors which attends to the orientation and leadership of the SGA. The hiring of an agriculturist who has specialized in management encourages the members to achieve intensive management of their farms. This service is exclusive to the SGA.

3) Self-financing services;

the members finance their SGAs through annual dues, which guarantees that they CONTROL the SGAs. Also, the QDAFF offers its concrete support to the development of farm management through the SGAs by subsidizing part of their operating costs. In concrete terms, the QDAFF contributes to the financing of an SGA as follows:

90% of the gross salary of a consultant for the first year. Subsequently, this percentage decreases by 10% per year of operation to a minimum of 50% for the central regions, and 65% for the regions which we in Québec describe as outlying.

4) A commitment for the member farmer;

to practice accounting, pay his dues, and function as part of a group which has agreed that mutual benefits are to be derived from the results and experience of each member. The data issuing from each farm are also submitted (anonymously) to the QDAFF in return for offering its financial assistance to the SGA.

5) A place of union.

where all the SGAs, through their Fédération, are in constant contact with one another, and in regular contact with all the farmers in Québec via the UPA.

THE SGAs: OPERATING STRUCTURES

AT THE LOCAL LEVEL

The ELECTED OFFICIALS of the SGAs have a major role to play locally in sustaining the DYNAMISM of their groups. ALL THE MORE since several of the services offered to members demand EFFORT on their part, and the discipline of devotion. The Board of Directors(BD), therefore, must represent both the forum and the heart for the SGA.

AT THE REGIONAL LEVEL

The MEMBERS OF THE PROVINCIAL BD are FIRST OF ALL regional representatives of the SGAs in their territories, CAPABLE of presenting their SGAs' viewpoints AND of stimulating their spirit. They reflect the IMAGE of the SGAs.

The consultants meet on a regional basis once a month. Since these inter-SGA meetings offer an excellent opportunity to review the situation, they are occasionally held between the BDs.

AT THE PROVINCIAL LEVEL

Through training, information, coordination, and representation, the FSGAQ supports and backs up the work of its SGA members. It is also responsible for RECONCILING points of view, DEVELOPING services, and obtaining the GUARANTEES necessary for the success of the SGA undertaking.

A team of regionally delegated consultants (RDC) meets regularly to TAKE A LOOK at the ACCOMPLISHMENTS-WORK taking place in all the regions.

The spirit of partnership is reflected in the fact that a representative of the Fédération's BD attends the meetings of the RDC, just as there is a RDC representative on the Fédération's BD.

WHAT IS DONE IN AN SGA?

Managing a business means, essentially, setting OBJECTIVES and taking the MEASURES required to achieve them. It therefore means knowing how to make the right decisions at the right time.

Through discussions with the consultant, it becomes easier for a producer to clarify his objectives. The INFORMATION and the TOOLS made available to him by the consultant helps him PLAN his business better.

Consequently, access to these tools, combined with the producer's experience and judgement, provides him with a solid foundation for directing his farm.

ACCOUNTING

The consultant supervises the farmer's accounting, which has been adapted to his needs; and especially through courses and individual follow-ups at the farm, he becomes better able to understand it.

At the end of the year, preparation of and assistance with closing the books makes it possible to produce reliable financial statements, which will be used to analyze the farm's profitability.

BUDGET

The budget for the year to come is based on previous statements: forecasts of income and expenditure the farm must or wishes to effect. Once the forecasts are established, the surplus or deficit is analyzed to see what is to be done about it.

A budget in itself settles nothing; but it makes a lot of things possible, such as:

- Reducing uncertainty,
- Anticipating difficult periods,
- Improving use of available monies, encouraging savings,
- Planning sizable investments,
- Defining accurately the results to be obtained and checking whether one is really heading in the direction of the objectives established,
- Planning the progress of one's operation; that is, being in control of events rather than being towed by them.

PROJECT STUDIES

The financial success of a farm enterprise is dependent on capital budgeting. In an SGA, each project can be studied in depth: the consultant will help you CALCULATE the impact of your project on your operation's profitability.

Types of projects:

- I) Productivity improvement
 (Drainage, TMR, silage, etc.)
- II) Expansion
 (Land, quota, finishing, etc.)
- III) Change in production
- IV) Farm association or transfer
- V) Replacement of assets
 (Leasing, purchasing, or contracting, actual costs of machinery,
 machinery syndicate, etc.)

The consultant will help you determine your priorities by concentrating on the most productive projects, in other words, those which will best improve your income.

FINANCIAL CONSULTANT

Financing is rapidly becoming a WAR OF NERVES in agriculture. In an SGA, you learn how to use financing reasonably, and at the right time.

With a consultant's assistance, you will find it easy to plan the financing of your projects and draw up complete records (balance sheet, income, and expenditure statements, budget estimates) in order to first DETERMINE your real needs and then properly SUPPORT your application for a loan or line of credit.

You will also be able to obtain advice concerning the various financing options: interest rate, reimbursement period, guarantees required.

As a result, WITH FIGURES TO BACK YOU UP, it will be easier for you to talk to lenders.

GROUP ANALYSIS

Group analysis is a management tool which makes it possible to EVALUATE and COMPARE accurately the efficiency of farm enterprises. It also depicts the COURSE taken by your operation.

The analysis is designed to identify, for the entire group and for each member producer, the factors which TO A LARGE EXTENT EXPLAIN the differences in INCOME between enterprises, using such criteria as:

- Milk/cow, piglets/sow
- Crop yield
- Milk/cow produced by forage
- Feed efficiency
- Feed cost/hl (or per piglet)
- Machinery costs/hl
- Etc.

The purpose of the analysis is not to determine WHICH enterprise is the best or worse off than your own, but rather WHY you are at a certain level.

When you, as a farmer, go through such an analysis, you will find that it enables you to better DIRECT your efforts to IMPROVE the profitability of your enterprise by identifying its strong and weak points. It also encourages you to share your experiences more and open your eyes to what others are doing. Furthermore, the consequences of technical and economic decisions can be analyzed.

Group analysis also makes it possible to calculate specifically the PRODUCTION COST of each member and compare this with the group figures.

TRAINING

There is no age limit on learning. When you are part of a structured group, it is much easier to organize courses which meet your needs:

- Dairy herd management
- Soil and fertilization
- Management of working time
- Etc.

INFORMATION

The members receive a periodic NEWSLETTER covering farm news, different technical and economic studies, Union activities, etc.

Afternoon or evening information sessions on different topics are also organized according to need (farm insurance, quota profitability, the grain market, etc.).

ALL ABOUT THE SGA CONSULTANTS...

TRAINING

Most of the agriculturists involved with the SGAs are trained in agricultural economics and have therefore specialized in accounting, financing, technical and economic management, and agricultural policies.

EXPERIENCE

Often, the SGA may be the consultant's first work experience on the job market. This is due partly to the priority the producers place on training the specialists they hire themselves, and partly to the very nature of the job, which requires the involvement of persons who are very receptive, especially during the SGA's first few years of operation.

DAILY ACTIVITIES

The professionals employed by the SGAs have a very high level of responsibility owing to their close relationship with the member farmers, the follow-up they provide, and the analytical tools they also must develop. Mutual respect between the SGA farmers and agriculturists bears fruit and is a strong guarantee for the future.

CHALLENGES

Being involved in the SGAs rather than hired by them is a condition essential to the realization of the SGA PROJECT. The limitations must be accepted for the advantage of being a STAKEHOLDER.

WHO ARE THE SGA MEMBERS?

INDIVIDUALS

1) Age:

Between the ages of setting up and retirement. However, the age group with the largest representation is between 32-38 years.

2) Education:

More educated than the average farmer, SGA members are often more critical. Even towards organizations which they inherited and did not have to build up themselves. On the other hand, they are quick to grasp where their collective interest lies.

3) Values:

Family powers and responsibilities are being shared more and more equally. There is more openness to group farming. The farm enterprise is not an end but a means to a normal life, including vacations and recreation. The family farm concept is viewed as a farm where the first priority is to expand it within its boundaries through efficiency. The SGA member is first and foremost concerned with HIS farm. Organizations, shows, and the social side are often secondary. More and more, WOMEN are occupying their rightful position in SGAs.

FARM ENTERPRISES

The principal production sectors are: milk (75%), grain (15%), pork (5%), beef (2 %), and other productions (3%). A good financial and technical-economic balance sheet is presented in Appendix I. ~~REMARK:~~ Although it is clear that SGA members have a higher than average level of indebtedness (many young expanding enterprises), it is much less so that the SGAs represent a group of "large farms".

THE SGA IDEOLOGY IS:

1) Belief in unionism.

It is because people have COMMON INTERESTS that they join together in an SGA. It is also because they believe that, TOGETHER, the interests they share with others will have GREATER WEIGHT than if each person shifts for himself. Hence the SGA motto: WORKING TOGETHER TO HELP ONE ANOTHER.

2) Based on autonomy.

that is, the farmers learn and take control of THE MEANS to ensure that their entrepreneurial responsibilities become POWER, the power TO DETERMINE THE DIRECTION OF THEIR FARMS, rather than a burden, as is too often the case.

3) An OPTION for management.

Because they are firmly convinced that the art of making the right decisions at the right time can be learned and is WELL worth the trouble. Because they are convinced that it is increasingly NECESSARY today, since the TOOLS FOR CONTROLLING farm operations are becoming almost factors of productions, or at least, often factors of maintaining production. Because, in the final analysis, A FIGURE IS WORTH A THOUSAND WORDS, and by working together in an SGA, THEY SUCCEED within a functional framework IN LETTING EACH MEMBER'S FIGURES DO THE TALKING, TO EVERYONE'S BENEFIT. Management through an SGA is not magic, and it works.

4) A close relationship of partners.

In the SGAs, the association of professional farmers and professional agriculturists has produced excellent results in terms of volume and quality. The mutual learning of EQUALITY acquired by working on a COMMON project, the success of the SGA, enriches the two professions immeasurably and gives the SGA a VALUE otherwise unattainable. THE CLOSE RELATIONSHIP between farmers and agriculturists IS THE SOURCE of the SGA's richness. Mutual RESPECT is its STRENGTH.

THE SGAs: A FEW PROBLEMS

WITH THE PEOPLE

The members of the SGAs too often behave as merely consumers of services. In an SGA, IT IS NOT ENOUGH to pay one's dues. In fact, to derive maximum benefits from the system, each person MUST do his share, make the SGA HIS business. In addition, to profit from it, YOU HAVE TO STAY in YOUR SGA, because the best results are medium- and long-term. YOU CANNOT BUY SHORT-TERM MIRACLES. Not in the SGAs or anywhere else.

The permanent workers/partners employed by the SGAs feel ISOLATED. Physical isolation because of the dispersal of the SGAs, but professional isolation above all, given the scope of the task to be done, often alone, with no technical support and little supervision. Moreover, the SGA requirements in terms of work tools are constantly increasing, and with them, THE NEED FOR CONTINUING TRAINING, which is becoming URGENT. Because the SGA's LEADING EDGE has a price.

Lastly, the elected officials often lack experience and availability, taking into account the fragility of our young SGA roots. We should slow down the turnover of administrators, PLAN FOR replacements on the BD, and ensure that the elected officials make the SGA their PRIORITY commitment.

WITH STRUCTURES

An SGA is very small. Forty SGAs and over 2,000 members, though, is something else. even if extreme care has been taken to avoid the "fattering" of structures. Ensuring an adequate circulation of information at all levels is a PERMANENT challenge. Ensuring that the rank and file members IDENTIFY WITH AND FEEL PART OF the whole SGA structure is another.

With CONSENSUS our only power, it is always difficult to make the timely decisions we MUST nonetheless make TOGETHER in order to progress. We are somewhat lacking in the SELF-CONFIDENCE which is so necessary if our SGA system is to prove ITS REAL WORTH.

WITH THE FORMULA

Financing is inadequate in the SGAs. Why? Because we are the first generation of farmers to invest in management accounting, and it takes TIME for this investment to bear fruit. TIME IS MONEY, SO WE ARE SHORT. In addition, we have to realize that management IS NOT A PRODUCT as such AND ALSO REQUIRES EFFORTS ON THE PART OF THE USER. Until we have proven ourselves, WE MUST BE ABLE TO COUNT ON ASSISTANCE WHICH TAKES INTO ACCOUNT THE USERS' ABILITIES TO PAY. Otherwise, the development of agricultural management, of which the SGAs are the spearhead, WILL BE threatened.

Adjustment capacity. The novelty of the SGA system in itself creates pressure. We can count ourselves lucky that, to date, THE SGAs ARE DOING WELL on the whole. But if their success depends on an enormous effort on the part of those involved, WE WILL HAVE TO MAKE PLANS AS SOON AS POSSIBLE BECAUSE THE FUTURE IS FAR FROM SECURE. Who will take over once the builders have left, how will we stabilize the membership and increase the tenure time for the employees? And isn't it time to review our overall directions?

BRIEFLY, A FEW RESULTS OF SUSTAINED AGRICULTURAL MANAGEMENT

- According to a study conducted by the Fédération des syndicats de gestion agricole, based on technical and economic data from its members, farmers who have belonged to a management union for more than three years have average net incomes 35% higher than those of farmers who have been members for less than three years.
- The average results of members belonging to farm management unions show a clear progression from year to year. For example, the operating incomes of the enterprises more than doubled between 1982 and 1986.
- In fact, significant differences exist between the results observed on the different enterprises. For example, in general, there is a gap of more than \$20,000 between the operating incomes of the top group of dairy producers (around 25% of the farms) and those of the entire SGA group. The results of corn producers show a difference of \$20 per tonne between the production costs of the top group and those of the entire group.
- According to a recent study conducted by Université Laval into the factors involved in the failure or success of a farm enterprise, participation in a management union seems to reduce the enterprise's risk of failure: a failure rate of 8% in comparison with 23% among non-members. In fact, of all the elements which can assist the farmer in organizing his work, making decisions, and solving problems, a single element proved significant in accounting for the survival of farms, namely membership in a management union (SGA). Moreover, the study reveals that the SGA members took part-time and full-time courses in agriculture at a rate almost double that of non-members.

THE FUTURE

Even though we know that time will prove us right, we must apply ourselves to stay on course in terms of the quality of the services we offer. Since we are convinced that we have developed very high quality tools, we can say that the SGA system is to management what Formula 1 is to automobile racing.

At the same time as we were developing tools to promote development of the farmer's autonomy in managing his enterprise, collectively we were acquiring extremely valuable expertise in microprocessing. We could write an entire chapter about that.

In fact, the group analysis which we use as a basic tool for the technical and economic study of our enterprises has been completely computerized by the Fédération des syndicats de gestion, such that it is retrievable from a provincial data bank. As a result, besides being useful to each member farm of a management union, the data collected are being used increasingly to study provincial issues, and thus are useful to Québec's entire farm community.

Moreover, we want to help speed up a change in mentality so that producers will recognize the necessity and validity of more intensive management. We have to admit it, here in Québec in 1988, it is unfortunately still considered more valuable to have an articulated tractor near the stable than to do your bookkeeping on the kitchen table. It is up to all the parties concerned to ensure that this state of affairs changes. Converting the farmer-labourer of the 1960s into the farmer-manager required today - that is our challenge.

But, strangely enough, even though Québec farmers are generally considered individualists by nature, they have the proper reflex to turn to collective action, both original and essential, in order to ensure greater efficiency on their farms. In this sense, the success of the young service represented by the management union system is but another reflection of this.

APPENDIX I

EXAMPLES OF REPORTS DRAWN

FROM GROUP ANALYSIS

01/24/87

PRODUCER 010105.7 - Version 1 1985

BALANCE SHEET

ASSETS		OPENING	PLUS	LESS	CLOSE	LIABILITIES		OPENING	PLUS	LESS	CLOSE
**CASH		1460			7796	TOTAL SHORT TERM (A/P)		2000			5000
CASH						GAIN (LOSS) ON A/P					
**ACCOUNTS RECEIVABLE		2796	1320		5722	**MEDIUM-TERM BORROWING					
GAIN (LOSS) ON BEGINNING A/R						**LONG-TERM BORROWING		33949			33214
**FORAGE		13926	-1013		12913	**TOTAL DEBTS & BORROWING		33949			38214
VARIATION INV. QTY						(LIABILITIES) **					
VARIATION INV. PRICE						BEGINNING EQUITY		112882			
**CEREALS						OPERATING INCOME			-27155		
**SUPPLIES		1000			3137	FORAGE: VAR. INV. PRICE					
**SLAUGHTER ANIMALS		6800	-4864		1936	ANIMALS: VAR. INV. PRICE					
**SUBTOTAL SHORT-TERM		25982	-4557		32504	INFLATION ON: MACHINERY			627		
						BUILDINGS					
						LAND					
						QUOTAS					
**ANIMALS		42400	-1056		41344	EXCEPTIONAL GAINS (LOSSES) ON:					
VARIATION INV. QTY						A/P, A/R, CASH			1320		
VARIATION INV. PRICE						PURCHASE/SALE GRAINS			-160		
**MACHINERY		45541	830	6516	39855	PURCHASE/SALE MACHINES					
PURCHASE, SALE						PURCHASE/SALE BUILDINGS					
INFLATION, DEPRECIATION						PURCHASE/SALE LAND					
**BUILDINGS		15606	627	1379	14854	PURCHASE/SALE QUOTAS					
PURCHASE, SALE						SALE OF OTHER FARM ASSETS					
INFLATION, DEPRECIATION						DEDUCTIONS IN ADVANCE			1500		
**LAND						CONTRIBUTIONS & WITHDRAWALS			5241		
PURCHASE & DRAINAGE, SALE						CLOSING EQUITY					
INFLATION		18602			18602	**TOTAL LIABILITIES & EQUITY**		148831	-20770	6741	110245
**QUOTAS						CONTRIBUTORY LOSS - BUILDING			-20770	6741	148459
PURCHASE, SALE						**TOTAL LIABILITIES & EQUITY**					
INFLATION						IN CONTRIBUTORY VALUE					
**OTHER FARM ASSETS		700	600		1300			7023			6685
**TOTAL LONG-TERM ASSETS		122849	1001	7895	115955			141808			141774
TOTAL ASSETS		148831	-3556	7895	148459						
CONTRIBUTORY LOSS - BUILDINGS		7023			6685						
ASSETS IN CONTRIBUTORY VALUE		141808			141774						

TECHNICAL SHEET - DAIRY PRODUCTION

NAME OF FIRM

UNIT

AVG. NUMBER OF COWS	52 HEAD
NO. BROOD COWS & BRED HEIFERS PURCHASED	1 HEAD
NO. BROOD COWS & BRED HEIFERS SOLD	2 HEAD
QUANTITY OF MILK DRUNK BY CALVES	1200 LITRES
TOTAL PMU (DAIRY PRODUCTION)	2.7 PMU
FAMILY PMU (DAIRY PRODUCTION)	1.7 PMU
MILKING TIME	1000 HOURS
MARKETING FEES LACKING O.A.	\$0
QTY OF D.M. FORAGE PURCHASED IN HA EQUIV.	1 HA
QTY OF D.M. FORAGE SOLD IN HA EQUIV.	3 HA
HA ALFALFA (SEED 70% AND OVER)	8 HA
AREA IN FORAGE	69 HA
AREA IN CEREALS	210 HA
AREA DRAINED	210 HA
HAY YIELD	4.43 BDMT
FORAGE CORN YIELD	10 BDMT
TOTAL PRODUCTION OF D.M. - VAR. INV. QTY	289.5 BDMT
TOTAL QUANTITY OF D.M. PURCHASED	10 BDMT
TOTAL QUANTITY OF D.M. SOLD	30 BDMT
QTY OF CEREALS USED (PRECEDING HARVEST)	7.7 MT
QTY OF CEREALS USED (CURRENT HARVEST)	64.3 MT
TOTAL QUANTITY CONCENTRATES (COWS & YOUNG)	171680 KG
% OF CEREALS USED FOR YOUNG (% OF \$)	20 %

FEED TABLE

TYPE	ENERGY MCA /KG	PROT. % C.P.	QTY KG COWS
DAIRY MASH 1	1.17	18	36510
DAIRY MASH 2	0	0	0
PRECALVING MASH	0	0	0
PROTEIN SUPPLEMENT 1	1.6	40	14470
PROTEIN SUPPLEMENT 2	0	0	0
GRAIN	1.6	10	103300
OTHER 1	1.6	8	3080
OTHER 2	0	0	0
TOTAL QUANTITY OF CONCENTRATES FOR COWS			157360

TECHNICAL SHEET - ENTERPRISE CONSTANT AND ALL PRODUCTIONS

TAB.L	UNIT
LABOUR INDEX	0.65
SEED INDEX	0.35
SOIL PREPARATION INDEX	0.65
SPRAY INDEX	0.5
SILAGE INDEX	0.4
MANURE SPREADING INDEX	0
RATE OF REMUNERATION FROM ASSETS	0.03 %
ANNUAL SALARY	\$12,000
AVERAGE PROVINCIAL SALES PRICE - PORK	\$ 0.7
AVERAGE PROVINCIAL SALES PRICE - PIGLET	\$ 41
RATE OF REMUNERATION FROM WORKING CAPITAL	0.03 %
INTEREST RATE ON CROP CHARGES	0.06 %
YEAR OF ANALYSIS	1983

ALL PRODUCTIONS

CEREALS USED/FOR DISTRIBUTION (BLOCK)	\$17084
LIFE COST	\$28434
PURCHASE OF FIXED ASSETS (TOTAL)	\$ 5848
SALE OF FIXED ASSETS (TOTAL)	\$ 0

PRODUCER: 1055072

ANALYSIS OF REIMBURSEMENT CAPACITY

1983

FINANCIAL ANALYSIS OF YOUR ENTREPRISE

ANALYSIS OF ENTERPRISE BY RATIOS

1983

DESCRIPTION	\$	%	
<u>PRODUCTS</u>			
MILK PRODUCTS	143706	71	
CATTLE PRODUCTS	13758	7	7.6
HARVEST PRODUCTS	31209	15	16.1
PIGLET PRODUCTS	0	0	
PORK PRODUCTS	0	0	
OTHER PRODUCTS	<u>12741</u>	<u>6</u>	1.9
TOTAL PRODUCTS	201414	100	
<u>CHARGES</u>			
CATTLE CHARGES	50546	25	67%
CROP CHARGES	20961	10	
PIGLET CHARGES	0	0	14%
PORK CHARGES	0	0	
CEREALS USED	17084	9	
MACHINERY CHARGES (#)	17450	9	
LAND AND BUILDING CHARGES (#)	6072	3	17%
SHORT-TERM INTEREST CHARGES	200	0	
LABOUR CHARGES	4444	2	
GENERAL CHARGES	16478	8	
CHARGES - OTHER PRODUCTIONS	<u>5550</u>	<u>3</u>	
(-) TOTAL CHARGES	138787	69	
= GROSS MARGIN	62627	31	
(-) LIFE COST	28434	14	
= MAXIMUM REIMBURSEMENT CAPACITY	34193	17	6148
(-) REIMBURSEMENT OF CAPITAL & INTEREST	24611	12	16452
= RESIDUAL BALANCE	9582	5	0
			49164

(#) Data Used in Calculating Returns

INFLATION ON MACHINERY	6148
INFLATION ON BUILDINGS	16452
INFLATION ON LAND	0
INFLATION ON QUOTAS	49164

(#) Does not include depreciation

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STANDARDIZED MANAGEMENT ANALYSIS - DAIRY PRODUCTION

1983

PRODUCTS

DESCRIPTION	YOUR FARM \$	%	GROUP %
MILK			
SALE OF MILK	143706	73	
MILK LEVY	226	0	
GROSS RETURN - MILK	143932	73	
ANIMALS			
ANIMALS (PURCHASE - SALE)	13306	7	
ANIMAL LEVY	0	0	
VAR. INV. ANIMALS QTY	-4842	-2	
MISC. CATTLE	450	0	
GROSS RETURN - ANIMALS	8916	5	
HARVESTS			
GROSS RETURN-GRAINS	22010	11	
FORAGE (PURCHASE-SALE)	5258	3	
VAR. INV. FORAGE QTY	-519	0	
CROP INS. COMPENSATION	3941	2	
? COMPENSATION	0	0	
GROSS PRODUCT - CROPS	30690	16	
MISCELLANEOUS INCOME	3600	2	
OTHER GROSS RETURNS	9133	5	
TOTAL GROSS RETURN	196279	100	

CHARGES

DESCRIPTION	YOUR FARM \$	%	GROUP %
CATTLE			
CATTLE FEED	21028	11	
GRAINS USED	17084	9	
DIRECT CATTLE CHARGES	8545	4	
MARKETING COSTS	10974	11	
REAL CATTLE CHARGES	67632	34	
REAL CROP CHARGES	20961	11	
MACHINERY AND EQUIPMENT			
MAINTENANCE AND FUEL	11871	6	
LEASE AND CONTRACT	5849	3	
DEPREC. - MACHINERY	16824	9	
(-) OUTSIDE WORK	-270	0	
REAL MACHINERY CHARGES	34274	17	
LAND AND BUILDINGS			
MAINTENANCE AND LEASE - LAND	18781	1	
MAINTENANCE AND LEASE - BUILDINGS	4194	2	
DEPREC. - BUILDINGS	11516	6	
REAL CHARGES - LAND & BUILDINGS	17588	9	
SHORT-TERM INTEREST CHARGES	200	0	
INTEREST			
INTEREST PAID			
H & L TERM	19400	10	
(-) INTEREST REBATE	-450	0	
REAL INTEREST CHARGES	18950	10	
REAL LABOUR CHARGES	4444	2	
REAL GENERAL CHARGES	16478	8	
OTHER REAL CHARGES	5550	3	
TOTAL REAL CHARGES	186077	95	

STANDARDIZED OPERATING INCOME: 10202

Jan. 10

PRODUCER: 1055072

STANDARDIZED LABOUR INCOME

DAIRY PRODUCTION	1983	YOUR FARM	GROUP
------------------	------	-----------	-------

STANDARDIZED OPERATING INCOME

(+) SHORT-TERM INTEREST CHARGES	200	10202	—
(+) REAL INTEREST CHARGES	18950		
(+) REAL LABOUR CHARGES	4444		

INCOME BEFORE INTEREST AND LABOUR

(-) REMUNERATION FROM WORKING CAPITAL	368	33796	
(-) REMUNERATION M & L TERM ASSETS	16606		

STANDARD LABOUR INCOME (SLI)

16822

NUMBER OF HECTOLITRES PRODUCED (HL)

3265

(SLI/HL)

5.15

NUMBER OF PERSON WORK UNITS (PMU)

2.70

(SLI/PMU)

6230

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Jan. 10

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CLASSIFIED BALANCE SHEET - DAIRY PRODUCTION

1983

ASSETS	OPENING	CLOSE
CASH	293	758
ACCOUNTS RECEIVABLE	945	0
FORAGE	8230	8533
GRAINS	1040	4864
SUPPLIES	1000	2094
SLAUGHTER ANIMALS	0	0
= SUBTOTAL - SHORT-TERM ASSETS	11508	16249
ANIMALS		
MACHINERY	145185	121968
BUILDINGS	100000	95172
LAND	78629	81889
QUOTAS	104000	104000
OTHER FARM ASSETS	108528	157692
= SUBTOTAL - M & L TERM ASSETS	5000	5000
= TOTAL ASSETS	541342	565721
	552850	581970
LIABILITIES		
SHORT-TERM DEBTS		
MEDIUM-TERM BORROWING	1050	2148
LONG-TERM BORROWING	15750	13500
= TOTAL DEBTS AND BORROWING	182369	178958
EQUITY	199169	194606
= TOTAL LIABILITIES AND EQUITY	353681	387364
	552850	581970

PBK 3: 1055072

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LITRES OF MILK PRODUCED: 326500

Jan. 10

RESULTS PER 100 LITRESDAIRY PRODUCTION

1983

P R O D U C T S

DESCRIPTION	YOUR FARM	GROUP	HEAD
GROSS YIELD - MILK	44.08		
GROSS YIELD - ANIMALS	2.73		
GROSS YIELD - HARVESTS	9.40		
OTHER PRODUCTIONS (INC. - EXP.)	2.20		
TOTAL YIELD	58.42		

RESULTS PER 100 LITRES

-6.53

C H A R G E S

DESCRIPTION	YOUR FARM	GROUP	HEAD
CATTLE FEED	6.44		
GRAINS USED	5.23		
DIRECT CATTLE CHARGES	2.62		
MARKETING COSTS	6.42		
REAL CHARGES - CATTLE	20.71		
REAL CHARGES - CROPS	6.42		
CHARGES - MACHINERY	5.34		
DEPRECIATION - MACHINERY	5.15		
REAL CHARGES - MACHINERY	10.50		
CHARGES - LAND AND BUILDINGS	1.86		
DEPRECIATION - BUILDINGS	3.53		
REAL CHARGES - BUILDINGS	5.39		
SHORT-TERM INTEREST CHARGES	0.06		
M & L TERM INTEREST CHARGES	5.80		
REMUNERATION FROM EQUITY	3.40		
REAL LABOUR CHARGES	1.36		
REMUNERATION - OPERATORS WORK	6.25		
REAL GENERAL CHARGES	5.05		
TOTAL CHARGES	64.94		

PRODUCED: 1055072

EFFICIENCY CRITERIA - 1983

App (- h)

Jan. 10

ENTERPRISE STRUCTURE

INVESTMENT EFFICIENCY

ITEM	UNIT	YOUR FARM	GROUP	HEAD	ITEM	UNIT	YOUR FARM	GROUP	HEAD
NUMBER OF COWS	HEAD	52	—	—	MACHINERY CHARGES/HL	\$	11.39	—	—
TOTAL MILK	LITRES	326508	—	—	ANIMAL-QUOTA ASSETS/M & LT ASSETS	%	48	—	—
NUMBER OF PMU	PMU	2.7	—	—	MACHINE-BLDG ASSETS/M & LT ASSETS	%	32	—	—
FORAGE ACREAGE	HA	69	—	—	LAND ASSETS/M & LT ASSETS	%	19	—	—
GRAINS ACREAGE	HA	210	—	—	ANIMAL ASSETS/HL	\$	41	—	—
TOTAL CROP ACREAGE	HA	279	—	—	MACHINERY ASSETS/HL	\$	30	—	—
ST INDEBTEDNESS/HL	\$	0	—	—	BUILDING ASSETS/HL	\$	25	—	—
MT INDEBTEDNESS/HL	\$	4	—	—	LAND ASSETS/HL	\$	32	—	—
LT INDEBTEDNESS/HL	\$	55	—	—	QUOTA ASSETS/HL	\$	41	—	—
TOTAL INDEBTEDNESS/HL	\$	60	—	—	GROSS RETURN/M & LT ASSETS	%	35	—	—
NET PRICE/HL	\$	37.80	—	—					

PROVALER: 1055072

EFFICIENCY CRITERIA - 1983

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Jan. 10

FIELD EFFICIENCY

STABLE EFFICIENCY

ITEM	UNIT	YOUR FARM	GROUP	HEAD	ITEM	UNIT	YOUR FARM	GROUP	HEAD
MILK PROTEIN-FORAGE/HA	LITRES	1276	—	—	MILK/COW	LITRES	6279	—	—
MILK ENERGY-FORAGE/HA	LITRES	168	—	—	CONCENTRATES/COW	KG	3026	—	—
ALFALFA ACREAGE	%	12	—	—	MILK/KG CONCENTRATE	LITRES	2.1	—	—
COWS/FORAGE HA	HEAD	1.1	—	—	GRAIN SELF-SUFFICIENCY	%	42	—	—
DRAINED ACREAGE	%	75	—	—	MILK PROTEIN-FORAGE/COW	LITRES	1212	—	—
MACHINERY CHARGES/HA	\$	133.34	—	—	MILK ENERGY-FORAGE/COW	LITRES	160	—	—
HAY YIELD	BDMT	4.4	—	—	COST OF CONCENTRATES (COWS)/HL	\$	10.27	—	—
FEED CORN YIELD	BDMT	10.0	—	—	COST OF CONCENTRATES (YOUNG)/HL	\$	1.40	—	—
					FORAGE D.M./ANIMAL UNIT	BDMT	3.8	—	—
					GROSS ANIMAL RETURN/COW	\$	171	—	—
					REPLACEMENT RATE	%	19	—	—
					VETERINARY CHARGES/COW	\$	55	—	—
					INSEMINATION CHARGES/COW	\$	20	—	—
					COW/ANIMAL UNIT	%	74	—	—

PRODUCER: 1055072

Jan. 10

EFFICIENCY CRITERIA - 1983

WORK EFFICIENCY

ITEM	UNIT	YOUR FARM	GROUP	HEAD
COWS/P.W.U.	HEAD	19	—	—
ANIMAL UNITS/P.W.U.	A.U.	26	—	—
MILK/P.W.U.	LITRES	120926	—	—
MILKING TIME/TOTAL HOURS	%	12	—	—
MILK/MILKING TIME	LITRES	327	—	—
MILK/WORKING HOUR	LITRES	40	—	—

NAME OF UNION: Union 1055, Head

STANDARDIZED MANAGEMENT ANALYSIS - DAIRY PRODUCTION

Jan. 11

1983

P R O D U C T S			C H A R G E S		
DESCRIPTION	\$	%	DESCRIPTION	\$	%
MILK			INTEREST PAID M & L TERMS	19400	10
SALE OF MILK	143706	73	(-) INTEREST REBATE	-450	0
MILK LEVY	226	0	REAL INTEREST CHARGES	18950	10
GROSS RETURN - MILK	143932	73	REAL LABOUR CHARGES	4444	2
ANIMALS			REAL GENERAL CHARGES	16478	8
ANIMALS (SALE-PURCHASE)	13308	7	OTHER REAL CHARGES	5550	1
ANIMAL LEVY	0	0			
VAR. INV. ANIMALS QTY	-4842	-2			
MISCELLANEOUS - CATTLE	450	0			
GROSS RETURN - ANIMALS	8916	5			
HARVESTS					
GROSS PRODUCT - GRAIN	22010	11			
FORAGE (SALE-PURCHASE)	5258	3			
VAR. INV. FEEDER QTY	-519	0			
CROP INSURANCE COMPENSATION	3941	2			
? COMPENSATION	0	0			
GROSS RETURN - HARVESTS	30690	16			
MISCELLANEOUS INCOME	3608	2			
OTHER GROSS RETURN	9133	5			
TOTAL GROSS RETURN	196279	100			
			TOTAL REAL CHARGES	186077	95

NUMBER OF ENTERPRISES IN GROUP: 4

STANDARDIZED OPERATING INCOME:

10202

A NEW WAY OF THINKING

La Ferme des Chûtes Enr. began in 1974 when two brothers (Gérard and Rodrigue Bouchard) formed a partnership.

We started out with a quota of 6,000 kilos (13,000 lb.) of dairy fat and 122 hectares of land to be cultivated. That same year, we added an 80-foot extension to the stable. In 1975, we acquired our first silo (made by Supérieur with concrete staves) and bought 20 more hectares of land. During that period, we had our milk recorded regularly by the PATLQ and our regular livestock feed was based on the food recommendations derived from the milk records. We used chemical fertilizers on our lands after having soil analyses done.

In 1981, our farm took a new direction. We decided to make it a four-person operation in order to improve working conditions. We again enlarged the stable, adding a 112 feet to the length. We built a second silo (made by Silo du Québec and poured on site) and bought two small farms with their quotas. In 1982, we began producing fluid milk. Two years later, we built a new silo, this time a bigger one (made by Beaudry) that balanced our forage storage and gave us a safety margin.

We have belonged to a farm management co-operative since September 1980, and now produce 400,000 kilos of milk annually. Our two employees, who are also our brothers, live in their own homes near the farm.

Our herd consists of 145 head, Holstein purebreds and crossbreeds, including 75 cows whose production averages 10 times their weight. We try to wait 30 months before our heifers calve. Feed consists of grass silage, dried hay, and grain rolled on the farm. We cultivate 299 hectares, 226 of which are fields and pastures, and the remaining 73 are used for growing grain.

There are two houses on the farm, as well as a stable 272 feet long by 34 feet wide. We also have three concrete silos, two of which are 20 by 60 feet, and the third, 24 by 72. Two barns can hold 15,000 bales of dried hay and have a storage capacity of 150 tonnes of grain, with a cold-air drying system. Thus, we have all the equipment we need to operate our farm.

HOW WE GOT INTO THIS TYPE OF FARMING

In 1978, after we had taken agricultural courses offered by the Adult Education program, and were then supported by the local MAPAQ office, we were better able to understand the results of the chemical analyses. Since 1970, my father and brother had always had soil analyses done every year, and we continued the practice.

Even though our soils were rich in calcium and we applied lime regularly, we had problems achieving the recommended neutral pH. Chemical fertilizers were used according to the recommendations based on the soil analysis results. Despite the large amounts of money invested in all this input, the harvests never lived up to expectations. Our soils had become deficient in trace elements. When we checked the soil analyses done in 1970, we found that those deficiencies had not existed then. In the stable, after one year of milk recording, in 1974, we produced an average of 3,000 kilos per cow. By 1978, the average had reached 6,400 kilos of milk per cow. Everything had increased. The meal bill, veterinary fees, cow rotation, and that very same year, almost all our cows were late calving!

We had discovered that the more we followed the recommendations of experts to the letter, the more our financial position deteriorated. So we decided to learn more about agriculture ourselves. The first two books on organic farming we used were La fécondité du sol by H.P. Roche and Les grandes productions végétales by Dominique Soltner. After reading these books, we understood that agriculture was not quite what we had been told, or what we had understood. Most of the experts with whom we did business were much more interested in selling us their products than in helping us. Those were the first two books on the subject we read, but not the last.

SOILS

We should begin by saying that our soils consist of 75 percent sand, 15 percent loam, 9 percent black earth and 1 percent clay. A large part of our land was classified as unfit for agriculture in the Forties. Poor little patches of land, is how the agronomists described them when they saw the soil analysis results.

The only fertilizer we use is cow manure. We have the equipment to store liquid manure and effluent. The quantities we use are limited to 10 tonnes per hectare of wet manure, or 1,000 gallons per acre of liquid. At that rate, we cover virtually all our lands every year.

The liquids are spread in spring, and the solids follow the hay harvest. As the field is cut, we apply manure.

We never plow the manure under, unless it has been on top of the soil for a month or two. That's called surface composting. We have not spread any lime since 1978, and the pH keeps improving year after year.

To spread 4 tonnes per acre, we had to modify our spreader, which has a 300-minot capacity. If you have to spread more than 4 tonnes, do it in several applications. Manure must be composted before being plowed under, otherwise it loses too much nitrogen.

According to H.P. Roche, at an application rate of 4 tonnes per acre, the manure releases such a small amount of nitrogen that all it does is enrich the air surrounding the plant, and the plant can capture it in gas form.

On our farm, we do not use manure as a fertilizer, but rather as a bacterial activator. We do not feed the plant, we feed the bacteria in the soil. This way of using manure doubles its effectiveness.

SPREADING

We do not plow the manure under, to prevent putting any undecomposed organic matter into the soil. If you plow manure under before it has decomposed, you create a temporary nitrogen deficiency in the soil. In decomposing, for lack of air, the manure monopolizes the nitrogen around it. In addition, this lowers the pH.

If soil pH is low and analyses fail to indicate a calcium deficiency, the problem is not insufficient lime, but rather something that keeps the calcium from acting. So you have to determine the cause. It may be poor drainage, or compaction that is making the inner soil lifeless. It is like in a silo; the pH is low because the forage is compacted and there is no oxygen. The soil has to be loosened by increasing the percentage of organic matter. A low pH is not necessarily caused by a lack of lime.

When we talk about achieving a neutral pH, the values vary depending upon the texture of the soil. It means 5.5 for black earth, 6.0 for sandy soil, 6.5 for loamy, and 7.0 for clayey.

COMPACTING

We are very careful about compacting the soil. We have four-wheel drive tractors so that we do not have to put calcium in the tires. All our wagons are equipped with the widest tires we could buy. We changed the tires on the manure spreader for ready-mix tires. When it is raining heavily, we do not put the cows out to pasture; we keep them on dry hay.

CROPS

The main reason we cultivate our land is simply to feed our livestock. Our aim is expressed in terms of milk or beef per hectare, because we have learned from experience that heavy yields do not necessarily mean a large amount of milk or beef per hectare.

To achieve our objective, we use forage blends that are as varied as possible, 7 or 8 varieties, plus wild plants in order to create a type of forage that is as natural as possible for our livestock. This type of cultivation benefits not only our animals, it also prevents mineral imbalance in the soil and assures us of a harvest, regardless of the weather, be it hot, cold, dry, or humid. There is always some plant thriving.

PLANTING FORAGE CROPS

The seed is mixed at our farm, and includes alfalfa, red clover, ladino clover, giant white clover, trefoil, millet, brome, cocksfoot, and fescue. We sow about 10 to 12 pounds per acre.

FORAGE YIELDS

Having a bumper crop does not necessarily mean improved milk production. For example, some farm management co-operatives with a forage yield of 5 tonnes per hectare obtain 2.6 tonnes of milk, which is about the same as ours. Essentially, what do high yields mean?

In 1986, for the first time, we did the same thing with grain, i.e., we sowed several varieties at the same time. Our grain mixture consisted of 25 percent wheat, 25 percent barley, 25 percent oats, 15 percent peas, and 10 percent buckwheat. We select a variety of barley that matures in about 97 days. In the case of wheat, we selected the fastest growing variety, which ripens in about 102 days. We windrow to obtain uniform maturity.

Practising monoculture without chemical fertilizers can create a few problems if the soil is not properly prepared beforehand. If you sow 150 pounds of barley per acre, and all the barley ripens at the same time, the soil never releases enough nitrogen naturally to satisfy the total demand.

If we sow only 25 pounds of barley per acre, when the barley comes to ear, the soil will be able to provide that nitrogen; and when it is the turn for oats the soil will again be able to provide the necessary nitrogen. It is a matter of dividing up the demand for nitrogen.

In 1986, we harvested 1,500 pounds per acre. Our crop consisted of 60 percent oats, 15 percent peas, 5 percent buckwheat, and the remainder of wheat and barley. Analyses indicated 12.9 percent protein per 100 percent dry matter, 1.60 megacalories, and 40 pounds per minot. Therefore it was somewhere between barley and oats.

The following year, the chemical analysis showed 14.5 percent protein per 100 percent dry matter, 1.79 megacalories, and 46 pounds per minot. The blend we harvest may vary from year to year, depending upon the weather.

Each plant draws minerals from the soil in a different way. The greater the variety of plants you have, the less your chances of creating an imbalance. Moreover, the reason we use buckwheat is to combat hempnettle.

CROP ROTATION

The limiting factor on our farm is drainage. To solve that problem, we rotate on a four-year cycle: one year of grain and three years of hay. Thus we improve drainage every time we plow the fields by rounding off the beds. Our soils have no subsurface drainage.

Legumes are used to build up nitrogen in the soil. When they start disappearing, it means there is enough nitrogen for a grain harvest. We then replant legumes. Hence, for our crops, we use the nitrogen in the air.

We never grow grain in the same field two years in a row in order not to lower the percentage of organic matter too much.

PASTURES

Our pastures are managed the same way as are our fields, except that grain is used for forage. Our livestock are put out to pasture in the summer, but only during the day. At night, they have access to a feed rack with as much hay as they want. We do not allow them to graze at night. That way, we maintain a healthy proportion of fiber in their diet.

THE HERD

FEED

As mentioned above, what we want from our fields is milk forage per hectare. In the barn, it is the highest milk forage per cow. The main function of cows is to produce human nourishment from fibrous food; this is also the most economical way of feeding them. We've found that cows cannot eat large amounts of grain without altering the forage digestibility coefficient.

By way of a reminder, this coefficient is highest for forage harvested just as grasses come to ear, and just as legumes flower, with a mixture of 35 percent legumes and 65 percent grasses.

We do not use just forage at that stage of growth. We can add rolled grains to reestablish the balance. The amount ranges between 3 and 4 kilos of grain per cow per day, accompanied by salt lick, without any other minerals or protein supplement. The efficiency of a cow's digestion does not vary with its lactation stage, so the cow receives no more grain at the onset of lactation than at the end. As regards proteins, they account for about 15 percent of a lactating cow's diet. We restrict it to that percentage in order to avoid excessive nitrogen in the feed.

And now, the calves. For the first month only, they're fed entirely on milk. In the second month, we feed them milk, hay, and grain, limiting the grain to not more than 1 percent of the animal's weight. They get the same grain as the cows, with a salt lick. Their diet is the same during the third and fourth months. In other words, we feed them milk until the end of the fourth month, limiting their milk intake to 4 liters per day.

From the age of five months to one year, we feed them forage, i.e., hay and silage plus one kilo of grain per day.

From the age of one year until two months before calving, our heifers get only forage, silage, and dry hay. Two months before calving, we put them on the same diet as a dry cow.

Management co-operative statistics indicate that the more meal we give cows, the less they digest forage. In fact, statistics from eight management co-operative show that those who feed their cows a lot of meal also have to give them 1.40 kilos of dry matter to obtain one liter of milk, whereas those who feed them less meal need give them only 1.20 kilos of dry matter to produce the same liter of milk. Some feed cows as much as 3.5 kilos of hay for 1 kilo of milk.

Inside the rumen, bacteria first attack the sugars and starches, and neglect the fibers. If you feed a cow a heavy diet of grain, the forage does not stay in the rumen very long, which does not allow enough time for the fiber to be attacked by the bacteria. It is expelled undigested. A cow has the same digestive capacity at the onset of lactation as at the end. A cow is a herbivore and not a monogastric animal. The grain competes with rather than adds to the forage.

GENETICS

We use artificial insemination to improve the genetic makeup of our animals. We select bulls rated high in terms of conformation and improving size, with no negative effects in terms of milk or fat. We think that to get a good average of milk, you need big cows, since with our method of feeding them, they produce between 10 and 11 times their weight in milk. If we could manage to get cows that weigh 700 kilos, they would produce an average of 7,500 to 8,300 kilos of milk. Increasing the average weight of the herd solely through genetics and feeding, without any outside purchases, is a technique that takes an average of 15 to 20 years to succeed.

Our herd currently rates about 70 percent good or better. With our feed system, the cows are carrying at least 100 to 125 kilos less fat.

ORGANIZATION OF LABOR

Four of us work at milking, but only three at a time. In other words, there are mornings when only one of us starts work at 9 a.m. We use this system of rotation until Saturday noon.

We never work summer evenings. We stop working at 5:30 p.m., then do the milking after supper. We never make hay after supper, on weekends or at night! Everyone gets a summer vacation.

FINANCIAL POSITION

In our farm management co-operative, our farm has one of the highest levels of debt per cow, and our gross income is below average.

Our income is lower, first of all, because only 20 percent of our production quota consists of fluid milk. A farm the size of ours, if the right to produce were different, could make about \$20,000 more per year without any additional expenses. Secondly, all our livestock ends up at the slaughterhouse. Here again, a farm with a herd that has a more advanced genetic makeup than ours can earn \$5,000 to \$6,000 more per year.

With less revenue, we achieve a higher reimbursement capacity; our method must therefore be more economical.

CONCLUSION

In our opinion, the progress in our results indicates that, if you balance complementary techniques as we do, a farm is like a chain: it is only as strong as its weakest link.

What we have tried to do in this paper is describe how we operate our farm. We are not saying that you should literally do everything we do on your own farms. We simply wanted to prove that things can be done differently from what is currently recommended, and that milk can be produced much more economically.

If you want to change things on your farm, go about it very gradually. Do not start by cutting down on chemical fertilizers; instead, try making better use of your manure. In other words, spread it during growing periods, when the grass is sprouting.

The important thing for you is to identify the weakest element in your production and try to strengthen it instead of constantly investing money in things that have no limits.

In 1978, when we decided to stop using chemical fertilizer, we were producing half our current volume of milk, spending \$6,000 on chemical fertilizer, \$20,000 on meal, and we had two thirds of our current acreage. So, we have doubled our production by increasing our cultivated acreage only by one third, and we have stopped buying chemical fertilizer and meal.

FERME DES CHUTES ENR.

Gérard and Rodrigue Bouchard

FARM FAMILIES - MANAGING IN THE 90's

A PAPER FOR MAKE IT '90 CONFERENCE

SAINT JOHN, N.B.
MARCH, 1990

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FARM FAMILIES MANAGING

- INTO THE 90's -

manage: Succeed in ones aims, from: Concise Oxford Dictionary
Succeed in achieving,

This is something that we all do, all day, every day. Not only in our personal lives like

- getting up today
- getting dressed
- getting to this session

but what we will spend the next hour or so examining, namely managing a business.

Let's get something straight. Farming is both a way of life and a business. All of our careers are a way of life. Being a Farm Management Specialist is a way of life but it hadn't better stop there. It is also a profession. This reminds me of the following slogan:

"If you treat farming as a business, it can be a good way of life.

If you treat it only as a way of life, it can be a lousy business"

TUESDAY, MAY 9th, 9:30 a.m.

Jennifer's voice was very strained on the phone: "You've just got to come out here. We all seem to be working hard but at the same time going in circles. No, we have no debt to speak of but I'm afraid we're heading for a real mess if we don't do something".

That was the voice of a 35 year old wife, mother of three, sister, daughter, etc. who called me last spring. She is involved in a very successful family farm which runs 1200 acres of land and 150 cows. What was I, a farm management specialist who operates 1/4 of land and 40 cows, going to tell a third generation farm family about running their farm?

When I arrived, the family consisting of dad, daughter and son-in-law, son and daughter-in-law, were all discussing various topics including:

- whether more of dad's land should be rolled into the company
- whether one of their ranches should be sold and the home ranch consolidated
- whether brother should just walk into sister's house to use the phone
- who should direct the hired employees
- should calves be sold this fall or kept over
- etc.

So, Where do we start?

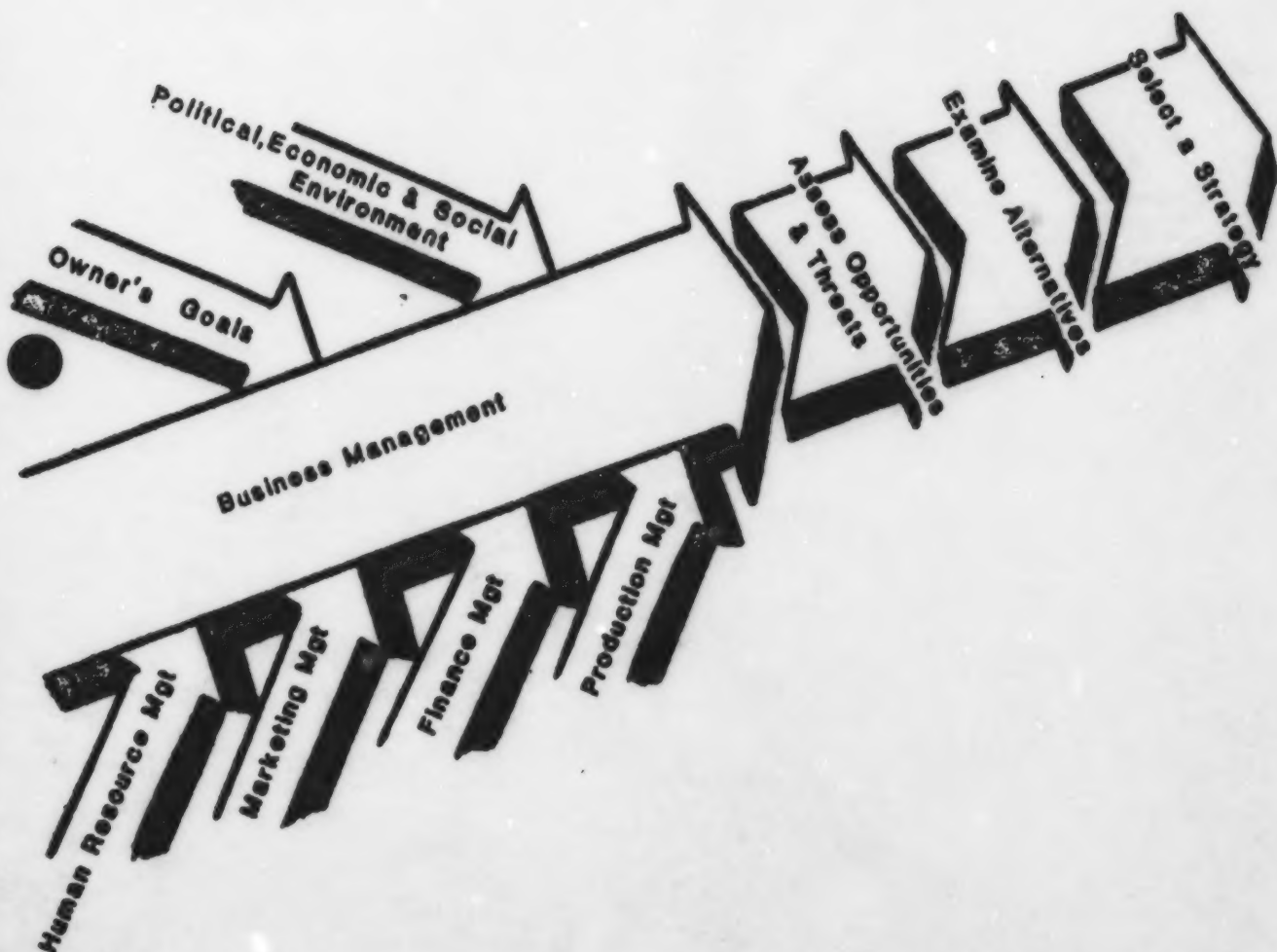
It is important for all managers to step back and get a broad view of how all of the things they are doing fit together.

WHAT ARE SOME OF THE MANAGEMENT ISSUES THAT FARM FAMILIES HAVE TO DEAL WITH?

List some below:

Managing, e.g.	<u>crops</u>	_____	_____
	<u>bank loans</u>	_____	_____
	_____	_____	_____

The following diagram depicts a view of business management.



The four arrows coming up from the bottom are the four main management areas within the business itself.

- a) Production: This area covers all of the technical, economic and management areas of production. It deals with three areas;
- what to produce.
 - how much to produce.
 - how to produce it.

Most of our "producers" are quite efficient and skilled in this role. Note that we often refer to farmers as producers!

- b) Finance: This area involves decisions about what kinds and how much investment should be made in buildings, land, equipment... how these assets should be financed and financial control of the business.
- What types of loans, at what interest, over how many years and is there cash to meet the commitments; are the types of questions addressed.
- Many of our farmers have become much better at this over the past 10 years.

- c) Marketing: Decisions and activities related to selling products and purchasing inputs is what this area is all about. Some of our farmers market their products while others just sell them.

- d) Human Resources: It really is people that make things happen either for good or bad. The way that people are treated, trained, rewarded, nurtured, etc. makes all the difference. Whether you have a hired man or an employee for instance makes a lot of difference. How family members are nurtured and treated within the business is important.

As I laid this plan out to the farm family, they could all start to see areas where they were doing real well and areas where improvement could be made. I didn't spend much time talking about how to produce calves or market them but I did spend some time on Finance and Human Resources.

Many of our multi-family farms split job responsibilities by crops, livestock or machinery which is all based upon production. Maybe they should be split by production, marketing, finance and human resource management and then figure out who will actually do the work as a separate issue.

Who in your farm is responsible to manage these four important functions?

Back to the Management Diagram, pg. 3.

An extremely important part of management is represented by the arrows on top. (Goals and Environment). The owner or owners of the business are the ones who have goals. They have goals for their own lives, goals for their family and in turn for the business. If you were hired to manage a business for someone, wouldn't you spend some time understanding what that owner's goals were?

GOALS: If you assumed a manager wanted to make the most amount of money possible, therefore sold all of the purebred cattle and went into hogs, even if you made lots of money, how would this help him reach his real goal of topping the Calgary show?

Businesses have strategies which will enable the owners of that business to meet their goals.

Does everyone in your family business know, really know, what the families' goals are? Are they written down and discussed? Or, is everyone just supposed to know what has evolved in dad's mind over the past 50 years?

ENVIRONMENT: This second arrow represents all of those outside forces which affect the business.

The government,
weather,
economy,
international trade,
animal welfare,
conservation,
legal,
credit policies,
etc.

Over the next ten years, what factors outside of your business will have an impact? While for many we can have little direct impact on them, we can as managers spend some time examining what might happen and finding out what the impacts would be.

BUSINESS MANAGEMENT: The large arrow with its short segments represents the dynamic process of management of the overall business. All of the inputs from goals, environment, production, finance, marketing and human resources have to be put together so that the job of business management can begin.

The manager

- a) assesses the threats and opportunities available
- b) evaluates the alternatives available
- c) selects a strategy.

This process is played over many times. For small things, the whole process may happen many times in just a few minutes. For major decisions like bringing daughter and son-in-law into the business it may (or should) take much longer.

While you do much of this management activity now, I trust that this discussion has helped put the management role a bit more in perspective.

If I left this subject here, I trust that you would have a better understanding, but management is much more than just a concept. It is a concept that can be put into practice. Management is about doing. It takes information and processes it so that decisions can be made leading to action.

For the rest of our discussion we will concentrate on the information which managers use rather than the management process.

Spend a few minutes completely independent from your spouse, partner or family members and list the three most important things about your business which you are currently measuring, i.e.:

KEY GAUGE (EXAMPLE): THE WEANING WEIGHT OF EACH CALF ADJUSTED TO 200 DAYS

KEY GAUGE # 1 _____

KEY GAUGE # 2 _____

KEY GAUGE # 3 _____

Think about which of the following categories your key gauges fall into. Now write the Gauge # under the appropriate heading.

GOALS ENVIRONMENT

BUSINESS

PRODUCTION FINANCE MARKETING HUMAN RESOURCES

(EXAMPLE)

It is interesting to note what we consider to be our three most important pieces of information. I would wager that at least one was under production and may be for some all three were in this area.

Let's spend a moment thinking about gauges. Our newer equipment is often so full of gauges it looks like the cockpit of a 747 jet liner. Why so many gauges? Take the most common of all, the fuel gauge. Couldn't you just remember when you filled last or better still just wait until you run out and then fill up. Obviously, a gauge provides you with a piece of information which will allow you to take corrective action before something negative happens. You don't wait for the motor to cease up before you check the dip stick and oil pressure gauges.

In a recent book on management, the statement was made that "What gets measured gets done". If we are measuring and monitoring things, we are more likely to take action.

We have spent a few minutes looking at what we are measuring, now let's look into those things that we would like to measure. Don't be concerned about the difficulty of measuring, etc. just write down below the one, two or three key things that you would like to know. Work independent from your spouse or family. There will be time to share later.

THINGS I WOULD LIKE TO KNOW ABOUT MY/OUR BUSINESS.

KEY GAUGE (EXAMPLE): THE AMOUNT OF DEBT THAT WE HAVE AND HOW IT HAS CHANGED
OVER THE LAST 20 YEARS.

KEY GAUGE #1 _____

KEY GAUGE #2 _____

KEY GAUGE #3 _____

These gauges may be the same as before or they may be different.

Take a couple of minutes and share with your spouse and/or family those three key things which you saw as significant.

- Are there any similarities - Why
- Are there any differences - Take time to find out why it was significant to that person.
- Did you know that those things were important to that person?
- Does the difference have any foundation in a difference in goals?

Take a minute and write the Gauge # under the headings below.

GOALS ENVIRONMENT



(EXAMPLE)

Have the headings changed? Many times what we are measuring may not be the most important or appropriate gauge. Sometimes others in the business have a lot different concern than we do.

While dad may be interested in production, son may be keen on marketing and mother on finance. This is not bad if it is recognized. In fact, it is often the strength of a family business. It is only when someone's concerns are ignored or passed off as unimportant, that problems can arise.

While I trust that these short exercises here were worthwhile, I challenge each of you to take the handout sheets and complete them.

These management reports are for each of the seven major management areas shown on the management diagram. Pick at least one gauge for each area but not over three. Spend time on them as a family management team. Be prepared to discuss why the information you want is important.

Management is not just a nice theory for big business. It is what farm families are doing every day. By making the process a bit more formal it will likely be possible to sharpen up a few areas and maybe recognize a few that we haven't been spending much time on.

As a farm management team, your job is to put together the production, finance, marketing and human resources of the business, keeping in mind the economic, social, political and natural environment in a way that will best meet your goals. Only your family can manage your business.

2

Daily Life on the Farm: Between Violence and Affection
by Jacques Brodeur

Organizations can be the scene of tremendous symbolic violence... Such violence is much more widespread than we really would like to admit. Not only is it one of the leading causes of the psychological problems people encounter at work, but it also lies at the root of a great deal of inefficiency.

-- Alain Chanlat, Gestion et culture d'entreprise : Le cheminement d'Hydro-Québec, p.189

"Here, sometimes we talk loud, or else we don't talk at all. But you can't say there's any violence because, when you get right down to it, we love one another..." That's the type of comment often heard in Quebec's farm environment. And if we take the time to pinpoint what expressions like "talking loud," "not talking at all," "when you get right down to it, we love one another" mean, we discover practically the whole range of human emotions located somewhere between the most ruthless violence and the most comforting affection. And these painful or pleasant feelings do not stem so much from the behavior (actions or words) we observe around us as from the ideas we have about the causes of such behavior.

For example, repeated gestures of impatience on the part of a son might lead a father to imagine his son is losing interest in the farm, no longer cares about the family business, etc. The son's actions might be perceived by the father as symbolic violence. And this symbolic violence, unconsciously inflicted by the son, might leave much more lasting scars on the father's heart than an act of physical violence would leave on his body.

On the other hand, if the son exhibits great care in handling some very expensive tools, the father might interpret that care as an act of appreciation (and even affection) on the part of his son.

This paper examines how violence and affection constantly come into play in the symbolic life (thoughts, feelings) of every member of a farmer's family.

Let's begin by looking at two real situations.

Mr. Dupont and his shy son...

Mr. Dupont, a good pork producer, has never hit anyone. He's the local "good guy". Yet, his 20-year-old son has trouble expressing himself when talking to his father. He speaks nervously, and never looks his father in the eye. When I asked him why he felt uncomfortable in front of his father, he automatically answered, "I always get the impression he thinks of me as a good-for-nothing." However, Mr. Dupont has never insulted his son. It's true that he's not the communicative type and rarely shows signs of appreciation. He tells himself that if he doesn't reprimand them, the others will "assume" that he appreciates them, because that's how he was raised, etc. etc. Unfortunately, Mr. Dupont has not completely realized that his six-foot, 190-pound son is very sensitive. And for many years, this sensitivity has led the son to interpret his father's silences as a lack of appreciation. It would never occur to Mr. Dupont that his relationship with his son is one of symbolic violence.

Children held hostage...

Irène and René have been married for six years, and together with René's father, operate his dairy farm. They live with their two little daughters, two and four years old, in a brand new house not far from the farm. They agreed before marrying that René would work full time while Irène stayed home with the children until kindergarten because, she recalls, she didn't want her children to go through what she experienced in her childhood: the constant absence of her mother, who had become a specialist in improving the dairy herd. "When I wanted to talk to my mother, I always had to go to the stable."

Then one day, when he came home from dinner to find his two daughters crying, René tried to comfort them. When nothing worked, he raised his voice. Irène then flew into one of the biggest rages of her life, she later confessed, laughing. "What didn't I say to him?...That he didn't know how to handle the kids...That he barely knew them...That he left me all alone with them...That he was ruining the education I was giving them...That he was more interested in calving than in the birth of his own daughters...That he was always with his father while I lived in exile, etc."

Here again we had a classic case of symbolic violence. Fortunately, Irène's outburst led to a working out of the problem. Actually, Irène and René had simply begun to feel overburdened by either the demands of the children or the emergencies in farm work. They had stopped telling each other what was going on in their heads. And then both began misinterpreting what they saw. "Each of us felt increasingly isolated, because we were deprived of tokens of appreciation. And what's worse, we no longer saw signs of attention,

tenderness. We interpreted everything the other one did as indifference, loss of interest. It was hard to live with. It was inner violence, and it was stressful. It was a classic case of symbolic violence."

Violence is not committed by the hand that strikes...

However, to understand symbolic violence, we have to free our minds from the widespread, customary prejudice that human violence is reducible to two forms: physical and corporal. This requires effort, because physical violence among human beings seems to fascinate a lot of people, proof of which is the popularity of the media that feature it.

**A daily dose of horrors...
in the name of truth and the right to information**

Whether we like it or not, every day we are fed by media constantly in search of bodies that have been assaulted, injured, mutilated, and by the most sordid accounts, all in the name of truth, of the details of the story. If that's not enough, we can always listen again and again to open-line shows for more details.

This kind of violence (highly profitable for the media) has also been described in figures and statistics to make it more scientific, an example of which might be: "In Canada, 500,000 women are beaten by their spouses; 250,000 of them live in Quebec. In Canada, 20 percent of homicides are committed by violent spouses, and in 84 percent of those cases, the woman is killed by her partner. Most assaults occur between 5 p.m. and 5 a.m., and most often without a witness." (XXX Monthly, 1987, p. 23) And besides this, there is the record of children who have been battered, raped, kidnapped, bought, sold, etc.

And yet, this physical violence is only the ultimate expression of another kind of violence that can go its merry way without anyone noticing... As if only the smoke and not the fire itself interested the firefighters...

**Symbolic violence,
like a virus that kills quietly...**

Since so many people are shocked every day by acts of violence around the world, often there's little room left to become aware of the symbolic violence that creeps into our ideas and behavior. Jacques Prévert wrote a little poem about this.

The Cup of Coffee

He poured coffee into the cup
 He poured milk into the cup of coffee.
 He poured sugar into the café au lait.
 He stirred it with a spoon.
 He drank the coffee. He set down the cup
 without saying a word to me.
 He lit a cigarette.
 He blew smoke rings.
 He flicked ashes into the ashtray
 without speaking to me, without looking at me.
 He got up.
 He put on his hat.
 He put on his trenchcoat because it was raining.
 And he left,
 without saying a word to me, without looking at me
 And me,
 I put my face in my hands
 And I wept.

There's no apparent violence between Prévert's two characters. Far from it. And one can always think the one who weeps is too sensitive, excessively vulnerable, overemotional.

What Prévert suggests is that there are very proper ways of acting that can help kill someone. "The proof that I'm nobody is that I'm not even worth a glance or a greeting." There's nothing really strange about not looking at someone. And yet, for someone intensely lonely, such disregard could be tantamount to just one more rejection.

But let's go even further. We've all felt that a greeting based merely on politeness is not enough to convince us that the other person respects us. As the Ginette Renaud song goes, "Solitude is seeing in someone else's eyes that I don't exist." Atrocious violence, this violence lurking under the mask of politeness. Should we think that we're too vulnerable when we suffer because the other person no longer sees that we still exist?

Symbolic violence? Maybe,
But on a farm, first you have to produce...

The world of business, commerce, and trade has always been considered a pragmatic, rational, emotionless world: business is business; there's no room for feelings in business, etc. Like all industrialized countries, the agriculture sector in Quebec resolutely adopted this ideology some twenty years ago. Becoming pragmatic and rational was utterly urgent. Some producers

became suspicious of traditional values that seemingly could not be reconciled with the implacable laws of a market economy: respect for others, producer solidarity, family life, etc. There would be time later for less pressing activities: dialogue, tenderness, affection, peace and quiet...

And now suddenly the business world is starting to talk about symbolic violence...

For the last few years, an unexpected message has been resounding throughout that same world of business and industry: take feelings into account and beware of committing symbolic violence! What poets, philosophers, religions, and prophets could no longer do, namely make people aware of the spiritual, symbolic, cultural, and qualitative dimension of their lives, including their work, the world of business administration and management began to proffer.

In the preface of a 1986 book on management science and human resources, one finds the following:

Our study on the nature and experience of the contemporary industrial world...has led us to conclude essentially this: regardless of the sites and systems, industrial work...is the source of and pretext for a type of "violence" inflicted by one segment of humanity on another, and is also a profound source of dehumanization and depersonalization of workers, at their work.

-- Aktouf, O., Les sciences de la gestion et les ressources humaines, Preface, p. 9.

Business administration and management schools have started criticizing the reduction of human labor to a matter of efficiency and the final product. They have compiled a list of symptoms of symbolic violence: loss of motivation at work, personality conflicts, causes of major air disasters in civil aviation, (NASA investigation into civil aviation), nervous depression, union conflicts, chain of demands, etc. And contrary to all predictions, the basic cause of all these personnel problems was not of an economic but of a symbolic nature. In brief, the employees were suffering from being treated like machines rather than as intelligent, feeling human beings. In other words, they realized that, in an organization, a lack of personal consideration for what one does and who one is is felt and interpreted as the greatest symbolic violence.

One would have to read interview transcripts, personnel management studies and books on the subject to become more convinced. For the moment, let's content ourselves with a few suggestive titles: L'entreprise névrosée (The Neurotic Business), Les ruses de la technique (The Tactics of Technique),

La gestion et la culture de l'entreprise (Corporate Management and Culture), Les sciences de la gestion et les ressources humaines : une analyse critique (Management Sciences and Human Resources: A Critical Analysis), Comment survivre dans les organisations (How to Survive in Organizations), etc. It should be pointed out that most of these books were produced by multidisciplinary teams. Is this a sign that, in future, the essence of a business will be less and less reducible solely to its economic component? (While writing this article, I learned of the death of Félix Leclerc, who often reminded us that we don't live on bread alone...)

Obviously, many management scientists caution against a type of candor that would have one believe every chief executive officer is concerned about the welfare of his or her employees, without any ulterior motive. Fortunately, vice-presidents have some clear and extremely frank ideas on the matter: "Psychology has shown that people seem to produce better if they're happy. But if experience were to prove that they would produce even better if they were furious, we would arrange for them to be that way permanently." (Kets De Vries, L'entreprise névrosée, p. 152)

Farm operations:

a special environment for symbolic violence

This deliberately ambiguous heading does not at all mean to imply that farm producers are more violent than other people. Its aim is to recall the still common reality we face: family environment coincides with the work environment. It also attempts to draw attention to everything hidden in the image producers have of farm work.

I must say I have quite often been astonished, these past 11 years, to hear so many expressions of love for the hard work on the farm from the mouths of farm producers' sons and daughters. Love that was so important it gave the impression of relegating love of family to second rank. And why not, in the near future, love of wife or children? Or else was this a way of positioning oneself at the fringes of a more intellectual and abstract activity focused on the meaning of emotional life in general, etc.? Or else, wasn't this love of work at least partly attributable to a compensatory value invested in the work itself owing to a lack of consideration from family members? The question remains unanswered.

It's a fact that, in every sector, including the agricultural environment, men and women work to forget their loneliness, to keep from thinking about other things, to combat stress. The energy spent on this manual labor suppresses a great deal of the insecurity caused by a lack of adequate communication, reduces tension, and ultimately makes it easier to sleep.

It was Erving Goffman who reminded us "that there's no agent more effective than another person for ensuring the development

of an individual or, conversely, for reducing the reality of his or her existence to nothingness, through a glance, a gesture or a comment." (in Chanlat, Gestion et culture d'entreprise, p. 189)

It was this type of thinking meant to be stimulated by the statement: The farm operation is a special environment for symbolic violence.

**Symbolic violence on the farm
does not concern only women, wives, or mothers**

As we have already seen, symbolic violence concerns every member of a farmer's family, without exception. It must be admitted, however, that the women in Quebec farming have often experienced especially difficult living conditions, which are sometimes related to a form of physical violence: isolation, transportation problems, lack of contact with neighbors or family (to avoid rumors), lack of recognition from spouses or children, being left out of certain decisions, especially in operations where the father and son (who became the husband) were partners, etc. Nevertheless, it is important not to judge yesterday's situations according to today's attitudes. Also, it must be acknowledged that a number of women in Quebec farming have also experienced a human growth that has no cause to envy the ideal of autonomy put forward these days.

Today, Quebec farm women are engaged in political discussions, increasingly coordinated across the province, within the context of farm women's unions and through the Bureau Provincial à la condition féminine of the QDAFF. This kind of thinking is challenging the men in the agricultural environment, politicians, and professionals in law and the business world as never before. And there is a basic reason for this challenge, which we now must explain.

**The women are not speaking
just for themselves**

Women haven't come to the fore simply to complain about systematic violence or make demands just for themselves. If only attention were paid to what farm women were saying, it would become clear that they are trying to awaken everyone involved in farming to a new awareness of human dignity and a new approach to work and the economy. And in so doing, they are continuing what earlier farm women's movements began.

As evidence of their involvement and economic realism as the 20th century draws to a close, women have demanded an updating of their legal, and financial status in the family business. Without such demands, as we all know, what they say about the

dignity and quality of life would once again be considered futile and utopian.

Nonetheless, what must be recognized is that, above and beyond the visible changes, what women have proposed is the urgent need for a new type of interpersonal relationship, a new form of business partnership. For, if you just meet farm women, you realize what they want is not so much a better quality of life for themselves alone, but for every member of the family, and especially for their spouses. "My husband told me he felt trapped, worse than in the days of slavery, and that something really had to be done about it, but how?"

**Farm women:
special witnesses of symbolic violence**

Not in the sense that they have been special victims of symbolic violence, but because they have seen such violence much more than most people involved in farming.

It is an indisputable fact that farm women have always played the role of mediator in conflicts between brothers, sisters, fathers, sons, and daughters. Similarly, farm women have been the sole witnesses of the symbolic violence inflicted on their spouses. "One of my boys often talks to me about his problems with his dad, whom he considers too strict. Yet on the other hand, my husband also tells me how saddened he feels by the lack of understanding with his son... He acts tough in front of the kids, but he's the most sensitive soul I know... And when he gets mad for whatever reason, he gets really sad and goes off alone on his tractor."

How many stories women could also tell about the kindnesses and capacity for affection of which they have been the special witnesses on their farms...

Let's get into affection!

I asked a farmer what affection meant to him. He replied, "I try to notice the little things. And my entire day is filled with little things. If I'm going into town, I remember to ask my wife whether she needs anything. It's just a little thing, but..."

And why do we see so little affection? And why are we so stingy with affection? Professor Chanlat suggested one answer when he wrote that, in organizations, people spend a lot of time on the defensive. "They expend a great deal of energy in protecting themselves from violence and on psyching themselves up again."

Yves Montand, some time after the death of his wife, Simone Signoret, said on a television show, "Three things must never grow old: our sense of humor, our lucidity, and our affection." (August 16, 1987)

Affection and work on the farm

Just as daily activities can give rise to different forms of symbolic violence, they can also generate various forms of affection. Once again, we must stop and think. For thinking sometimes requires much more effort than very hard work. Einstein expressed this idea rather well when he asked, "Do you know why people like cutting down trees? Because they can see the fruits of their labor instantly." Obviously, mental activities, like sowing, don't produce immediately visible results.

Let's look at the work on a farm, more specifically the distribution of daily chores. There are two ways of handling this division of labor. On the one hand, one can care more about the work to be done than about the son, daughter, father or mother who'll do it. And this will be felt. "Around here, it's the work that counts...not who does it." On the other hand, there are also farmers' families, not necessarily the wealthiest, for whom the people matter more than the things to be done. The necessary chores are distributed in an atmosphere of remarkable mutual consideration: questions are asked about whether people are available, their interests are known, all sorts of negotiations take place among brothers, sisters, and parents, and schedules are drawn up by checking whether they suit everyone, etc.

In these farm families, the chores are usually done better and the machines break down less often. Parents and children feel appreciated. To put it briefly, in these families, each has understood that others also exist, and that each individual's contribution depends on the contribution of the others. And, as if by chance, these families still have time for laughter, teasing, explanations. And when the time comes for the big decisions, transfer of the estate or a new form of business arrangement, the atmosphere is conducive to maximum lucidity in the decision-making and the best chances of harmony between all family members.

In these families, the daily routine provides as many opportunities for affection as it might have provided for symbolic violence.

**The biggest obstacle to affection:
it's often considered useless...**

When we live in a world where human activities are inspired by concepts such as efficiency, profitability, productivity, etc., it's only normal to develop a utilitarian philosophy of life. And in that philosophy, the archenemy is the useless, the unprofitable...

That philosophy could become a trap if we doom ourselves to be cast aside once the job is done. A shovel stops being useful in winter once the driveway has been cleared; at the end of winter, we store it so that it doesn't get in the way, because from then on it's useless. And it doesn't suffer as a result. But what would happen if human beings thought of themselves as shovels? One thing is certain: they would fear that it might stop snowing or that they might get sick, or grow old and be shoved aside, once they've exhausted their ability to be useful...profitable.

The purpose of affection is never usefulness, but discovery of the other. Everything can be done without affection, even lovemaking. But the other person will know very well that he or she is being used solely out of necessity...

Feeling useful without feeling affection around you is one of life's worst experiences of despair. The feeling of being useful without any recognition leaves an aftertaste of symbolic rape.

Daily life on the farm: between violence and affection...

Living on a farm means waking up every day knowing that you can spend the day shifting between violence and affection.

And this level of consciousness can guide the choice between violence and affection. This choice does not presuppose any particular social or economic structure. In fact, the businesses most conducive to human growth do not necessarily suppress human violence, just as the businesses that are hardest to manage do not necessarily suppress affection.

But, if we decide to pursue affection, we will notice even more violence around us, in words and actions, in structures and organizations.

If we opt for affection, we will also see more clearly all the architects of a better world at work in economics, politics, law.

If we opt for affection, we won't insist that everyone else become affectionate as soon as possible. For affection means first and foremost a tremendous sensitivity to the personal growth rate of every human being.

Affection means spending time with your son, not just when he's in a hospital bed, but because he's alive, unique, so different from his brothers and sisters. Violence would be forcing your children to be alike.

Affection means finding time for the joy of others, just as you managed to find time for your own suffering.

Affection means knowing how to find out whether I clearly understand what the other person wants, or wanted to say... Violence would be to never think about it.

Affection means leaving the house early in the morning without slamming the door because the others are still sleeping. Violence would be to never think about it.

Affection means admitting that sometimes we get on others' nerves. Violence means not caring what they think or feel.

Affection means believing automatically that we're not always right. Violence means imposing yourself as an embodiment of truth or experience.

Affection means seeing the hand that offers you a glass of water when you're thirsty and saying thank you before drinking it.

Affection is an antidote to symbolic violence, an antidote that acts immediately: put tools back in their place so that others don't have to look for them, or else make a slight detour simply to ask, "Everything okay?"

St-Hyacinthe
August 15, 1988

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Building Better Working Relationships Between Farm Family Members

**Dr. Ronald J. Hanson
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Areas of Disagreement in a Family Farming Operation

1. Decision Making.
 - A. Who has the final say in matters?
 - B. Who is really the boss?
2. Farm Records.
 - A. Who has the responsibility for keeping records?
 - B. How will records and farm accounts be handled?
3. Money Spending Policies.
4. Time-Off Policies and Vacations.
5. Family and Business Goals - Setting Priorities.
6. Farm Employees.
7. Role of Wife (Wives) in the Farm Business.

Human Relationships Necessary For a Successful Family Farming Operation

1. Motivation to farm by son/daughter.
2. Ability to communicate as a family.
 - A. Mutual respect for each other.
 - B. Willingness to listen.
3. Ability to compromise and work things out together.
4. Opportunity for son/daughter to learn and make mistakes.
5. Keep differences in lifestyles (values) between parents and son/daughter out of the farm business.
6. Remember the other children in the family. Avoid problems of favoritism and jealousy among the children in a family.

**** Presented at the NEW BRUNSWICK FARM MANAGEMENT CONFERENCE "MAKE IT '90" on March 12, 1990 in Saint John, N.B., Canada, at the Hilton International.**

Common Mistakes in a Family Farming Operation That Often Lead to Conflicts Between Family Members

1. Let a father-son relationship turn into a parent-child relationship.
2. Family members "gossip" about each other. Too many misunderstandings.
3. Carrying a "grudge" too long.
4. Let arguments go beyond the boiling point. Family fights develop. No cooling off period.
5. Fail to set family and farm goals. Do not discuss personal and farm family priorities. "Not actually running in step."
6. Not able to have frank - open - honest discussions. Not able to "say what you mean and mean what you say."
7. Family members not willing to try to work it out together. Not willing to get along.

Personal Characteristics of Farm Families With Strong Family Relationships

1. Spend time together as a family.
2. Family members are able to communicate and listen to each other.
3. Have a sense of commitment to each other. Develop family loyalty and have family pride.
4. Have a religious faith together as a family.
5. Know how to deal with a crisis.
6. Always focus on the positive elements even in a difficult situation.
7. Family members express appreciation for each other. Show each other that they care.
8. Have fun together as a family. Have a sense of humor. Take personal kidding in stride.
9. Take the time to strengthen family ties and reaffirm their hopes and dreams.

Words of Advice to Consider in Building Better Working Relationships Between Farm Family Members

1. Don't rush into any type of family business arrangement.
2. Talk things out ahead of time. Too many decisions are made under time pressure or stress.
3. Talk about the "what if" situations. Analyze all possible alternatives/options.
4. Openly discuss (1) goals (2) personal feelings (3) expectations between all family members.
5. Seek outside help/counseling.
6. Practice preventive maintenance.
7. Recognize there will be "moments" in any family situation. Keep a positive attitude.
8. KEEP COMMUNICATIONS OPEN Between ALL Family Members.

Strategies to Help Resolve Farm Family Conflicts

1. Initiate open and honest discussions.
2. Keep all discussions on an objective and positive basis.
3. Try to identify the real problem cause. "What is it that is really bothering someone?"
4. Be assertive but not aggressive when sharing your views or feelings. State your position without threatening or attacking the opinions of others.
5. Make sure others understand that even though you might disagree, you still love and/or respect them at all times.
6. Avoid "insurmountable/no win" situations.
7. Build a feeling of trust between all family members.
8. Remember it takes (1) Patience, (2) Persistence, (3) Understanding, (4) Courage, (5) Personal Strength and (6) Forgiveness. It takes a lot of effort by all family members for a farm business to be successful as a family operation.

Ideas for Implementing Farm Family Business Meetings

1. Set dates so that business meetings are held on a regular basis throughout the entire year.
2. Meeting site should be on neutral territory.
3. Establish an agenda for each meeting so that the meeting itself has a direction and purpose to achieve.
4. Establish any necessary ground rules to be followed during the meeting.
5. Conduct each meeting on a business-like basis. Develop an attitude of professionalism.
6. Keep minutes of any major decisions discussed.
7. Remember that holding family farm business meetings on a regular basis (1) improves family communications, (2) reinforces the feeling that the family farm is a team effort among all family members, (3) eliminates any surprises among family members, and (4) helps to keep the "personal or family biases" out of the farm business operation.

Ten Skills for Good Listening Between Farm Family Members

1. Do not pass judgment until you have understood what the other person has said.
2. Do not add viewpoints or change what the other person has said.
3. Do not permit your attention to drift away while the other person is still talking.
4. Do not interrupt or change the subject.
5. Do not close your mind.
6. Do not finish for the other person.
7. Do not permit wishful listening.
8. Do not rehearse your response.
9. Do not put the other person off.
10. Do not rush the other person.

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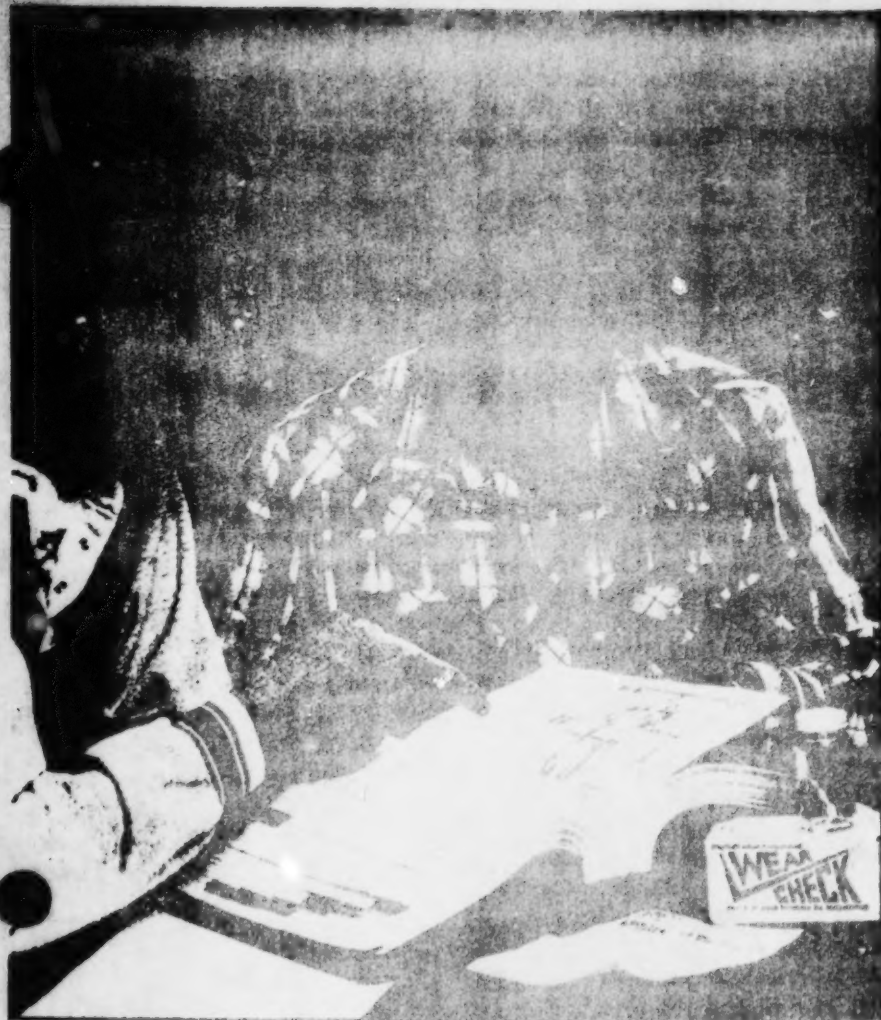
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Predict breakdowns and cut costs with PPM

By Dave Mowitz, Senior Machinery Editor

Rudy Klein doesn't guarantee your combine or tractor won't break down in the field again.

And he won't guarantee that repair bills will become nonexistent.

But he will teach you how to predict breakdowns before they occur. The rest, fixing failing parts and cutting costs, is up to you.

The Fults, Illinois farmer/businessman has become the gunt of preventive maintenance for agriculture. He teaches farmers a step-by-step approach to machinery maintenance that goes beyond just checking fuel and oil levels, tire inflation and washing windshields.

PPM (planned preventive maintenance) is a system by which failing

bolts, bearings, shafts or sheet metal can be discovered prior to breaking.

"The key is early detection," Klein says. "The failure of a \$40 bearing could wreak havoc with thousands of dollars in gears and housings."

Finding that failing bearing is done by breaking machines (from tractors to grain dryers) into categories and subcategories and then looking at the condition of each section's individual parts and pieces. Using such diagnostic tools as oil analysis and a mechanic's stethoscope is encouraged.

For example, a tractor would be divided by engine, steering, hydraulics, drive train, electronics, instruments and controls and cab. The subcategory

The key to preventive maintenance lies in knowing how parts affect each other. Consulting owners manuals, as A. J. Guebert (left) and Rudy Klein are doing, helps pinpoint the cause of a problem.

ies of an engine, for example, would include cooling, fuel, air, ignition, engine oil and exhaust.

At least once a year, and more often in some cases, the parts and pieces of each subcategory or category are given a thorough examination.

PPM also requires accurate record keeping. This means developing a maintenance board and daily, weekly and seasonal checklists like those shown on the right. The equipment operator, for example, records any problems when they are first noticed on the daily checklist. This information is transferred to the maintenance board and is not removed until the problem is solved. Meanwhile, the daily checklist is filed away with the operator's manual in individual notebooks.

Finally, PPM helps to make the decision about "Do I overhaul the engine now or can it be nursed through another season?" It can help pinpoint the causes of reoccurring problems and even assist in deciding when it's time to buy replacement equipment.

"PPM shows you ways to spend a dime to save a dollar and that's important during these tough times," says Farmers City, Illinois producer Harold Heacock, a Klein "student."

As complicated as PPM sounds, it is relatively easy to use once the concept is understood. "It's just using plain good old common sense," says Cherry Valley, Arkansas farmer Bill Nicholson. "And you don't have to be a full-fledged mechanic to use it."

Neither is PPM a new concept. It has enjoyed immense popularity in trucking and construction companies and with the armed forces.

In fact, Klein became familiar with preventive maintenance during his days in the Navy. He later adapted the concept to agriculture when he returned to the family farm in 1969. "I first used it on my own equipment with tremendous success," Klein remembers. "Then the neighbors asked me to do PPM on their equipment."

Demand for this service grew so rapidly that Klein started teaching PPM to farmers. The program is now taught with cassette tapes, a textbook and access to a toll-free telephone number. The program sells for \$250.

Klein feels so strongly about PPM that he'll refund the cost if at least \$500 in parts, labor and downtime aren't saved in the first year of use.

Red Bud, Illinois farmer A. J. Guebert saved that much in just 6 months. Guebert was one of Klein's first students and has since become a strong advocate of PPM. "The program doesn't hand you a set of check-

lists to follow. You develop the lists fitted to your equipment's specific needs based on what you've learned."

For example, a tractor used for primary tillage will require different maintenance than the chore tractor, adds Sharon Rippelmeyer of Valley Farms Inc., Valmeyer, Illinois. "I'll take extra time when examining the tillage tractor's transmission, for example."

Francesville, Indiana farmer Robert Cook finds PPM helps extend the life of used equipment. "We have 3,000 to 4,000 hours on some tractors and figure to get another 3,000 hours before running into serious problems." 

Comments from a daily checklist are transferred to a "to do" chart (below) in the shop. The list was developed by Sharon Rippelmeyer for her operation.



Preventive maintenance guru Klein.

Learned the value of PPM at 70,000 feet

Piloting a screaming fighter jet quickly teaches you the value of good maintenance. "There aren't any parking lots to pull into at 70,000 feet if something goes wrong," Klein says with a smile.

Klein became familiar with preventive maintenance as a naval pilot and jet maintenance officer in the 1960s. He brought the idea home after returning to the family farm.

"I came home in mid-August and faced harvest with a worn-out combine," he remembers. "I figured if PPM worked on jets surely it would do the job on farm equipment."

And it did work. "The combine was free of downtime that season for the first time in years."

This drew the attention of neighbors who admired Klein's success. That started him off on a new career teaching farmers of all sizes of operations about the benefits of preventive maintenance.

He started offering PPM courses on cassette tape in 1983 and has since taught over 2,000 farmers and equipment dealers in eight states and many Canadian provinces.

Now, Klein's curriculum is sold by bankers, equipment dealers and the Future Farmers of America. Massey-Ferguson recently signed an agreement with Klein, and John Deere is seriously considering adopting the program.

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2. **KNOW WHICH PARTS ARE GOING TO FAIL AND HOW ABOUT WHEN BEFORE THEY ACTUALLY AND STRAND YOUR EQUIPMENT**
3. **PLAN YOUR REPAIRS FOR YOUR SHOP AT YOUR CONVIENCE, DON'T LET A SURPRISE PLAN THE REPAIR FOR THE FIELD**
4. **PREVENT FAILING PARTS FROM EVER HAVING THE CHANCE TO CAUSE DAMAGE TO ADJECTENT AND OFTER MORE EXPENSIVE PARTS**

COMMUNICATION ON THE FAMILY FARM:

A QUESTION OF TEAMWORK

Gilles Perreault

Increasingly, the industrialization of agriculture is forcing farm producers to rethink their individual modes of operation and consider joint family operations, partnerships in which teamwork becomes indispensable.

In cases where family farms are operated jointly, regardless of the legal form chosen, corporation or company, I think it is essential to stress the human element, in other words, communication, before the technical, material, or financial aspects.

Participants involved in training sessions on communication between partners all noted that the human aspect, or the relationship between family members, has almost never been delved into in any detail.

FAMILY RELATIONSHIP VS RELATIONSHIP BETWEEN FARM PARTNERS

Farm partners do not know how to deal with the human aspect, or simply do not think about it. They say, "I know him or her very well, that's my father, or brother, or wife, etc." It is important first of all to distinguish between family

relationships and the relationship of partners in a farm enterprise. It is not a matter, for example, of believing that two friends or two brothers would make a good team because they work at the same place, go fishing together, and, as good handymen, help each other with odd jobs. Those are indices, but they do not automatically guarantee that operating a farm jointly would go as smoothly as sharing their leisure time.

Sure, someone may be a member of your family, but he is first and foremost a person with whom you must get along, reconcile your mode of operation, share common goals, decisions, responsibilities, etc. The worst thing that can happen in farm partnerships is to continue acting as though you were still working on your own. Inevitably, over the short term, the partnership will become unbearable and end in dissolution.

PERSONAL OBJECTIVES VS COMMON GOALS

It is a basic necessity to have a clear understanding of your personal needs and the objectives of each party and verify whether they coincide with the requirements and needs

of the enterprise. For example, if the family farm requires a higher level of indebtedness, more hours of work, and your personal objectives are just the opposite, that is, to reduce the stress of indebtedness and decrease your working hours, it is clear that you will not be happy.

Moreover, it is essential that each party's personal objectives correspond with a common goal. In other words, what do you have in common to share in developing the enterprise? If, at the outset, you have few or no common goals, or different goals, why go into business together? On what grounds? For example, how can you expect things to go smoothly if one of the family members, a workaholic, hopes to double the dairy production, while another member wants to reduce his working hours, along with the herd. If no adjustments are made to reach a common position, dissension is inevitable.

We tend to take out our calculators too quickly. We talk about figures instead of the persons concerned, their individual tastes, concerns, and needs. It is essential to verify the support of these persons. They must be

encouraged to express openly their faith in the project, check whether it corresponds with their needs, and indicate their commitment to a joint decision.

Avoid being at the mercy of the enterprise and allowing your needs to come last. What is important? Trying to be happy. Does this mean an enterprise which meets your needs or one where its needs take first place? You must avoid going about it the other way round. By clearly expressing your own needs and the family's needs, they can be translated into objectives, and then evaluated, maintained, or readjusted on a regular basis.

RESPECT AND ACCEPTANCE

Even though it is necessary to share common objectives, it is also very important to respect each other and accept that each person's skills are different but complementary. Respecting and accepting the other person do not exclude certain adjustments or changes in that person's attitude and behaviour. Nonetheless, people must be what they are, not what you would like them to be. Concentrating on your own capacity to adjust to the ways other family members function can prevent major disputes or frustration.

BALANCING CAPACITIES AND LIMITATIONS

It is also essential to ensure there is not too wide a gap between the different capacities of each partner. Overall, on the human, material, technical, and financial levels, each person's capacities and limitations must tend to balance one another.

For example, one of the partners may be skilled in management and feel responsible for developing the business. The other partner limits himself and is concerned only with getting the work done.

This discrepancy between the partners' functions and capacities will lead to an imbalance, in the form of an employer-employee relationship. One becomes the other's boss. The notion of balance must come into play. The two functions will have to be adjusted and shared, in the interest of organizational effectiveness and individual satisfaction. You should draw up an inventory of each person's skills, knowledge, capacities, and experience and measure the gaps, with a view to maintaining a balance.

SHARING OF RESPONSIBILITIES AND WORK METHODS

Once the individual skills, capacities, and limitations have been recognized, the partners must establish work methods.

equip themselves with tools in order to maximize their operations. Initially, they divide the different responsibilities in accordance with their skills, capacities, and personal interests. They discuss, analyze, and decide together on the results to be attained in each sector of responsibility.

After that, each partner is totally and completely responsible for deciding on the best means of achieving the desired results. Mutual trust is essential. They plan the work, divide up the tasks, set aside a certain amount of time for achieving them, and establish deadlines. As things progress, each partner informs the other of how the work is going, and they make adjustments along the way.

MEETINGS ARE ESSENTIAL

Making provision for regular meetings to discuss, analyze, make decisions, and plan is an excellent way to maintain efficiency and harmony. In most other sectors, whether industrial, commercial, or service-oriented, the partners hold meetings regularly. In agriculture, it is more than desirable, it is indispensable for the partners to take the time to meet.

A time set aside specially for communication will balance and develop a functional, harmonious relationship between partners. Fairly often, partners are forced to meet when there is some problem or malfunction, or worse still, when a crisis or conflict arises. To prevent or reduce such situations, regular meetings are an excellent method.

THE ROLE OF WIVES

What is the role of wives in farm partnerships? There are as many answers as there are persons. It is a personal question, one which relates closely to the type of enterprise and the way in which the individuals function. The answer is not important. However, it is very important to question the persons concerned and not assume you know what they will say.

It is essential to determine with them what they want and clarify what they do not want. It is very likely that a wife who has not expressed or been unable to express her expectations will be dissatisfied. Inevitably, her husband will be affected, and this mood will carry over into the partnership.

To avoid such a situation, many persons insist that wives not be involved. "Leave them out of it," they say. And

several even add, "The less they know about it, the better it is." But the wives are there, and they have to live with the ongoing stress of the business, suffer the consequences, endure the increasing demands of operating a farm, and are forced to become involved directly or indirectly.

So, why not take their expectations into account? Formally or informally, but take them into account. And if you do so, well then, give them some form of concrete recognition. For example, if a wife keeps the books up to date and this is just what the business needs, her work must be recognized tangibly. And not be taken for granted because she is the wife. The same applies to any other work. And if they are truly motivated, continually involved, share the common objectives, put in a lot of effort and time, then why not recognize them and give them some decision-making power?

Partnership is becoming more and more common, whether you choose it or not. But a partnership is something you learn about and develop, provided that you believe in it, adjust to it, and establish the conditions for its operation. The quality of the interpersonal and family relationships in the partnership is a guarantee of success and always takes precedence over the material and financial aspects.

Invest in your joint working relationship by discussing the different factors to be considered or enrol in a training session on communication between partners. It is certainly a good investment, and for several, one of the best.

Gilles Perreault

Training and Leadership Consultant

1988 03 14

QUESTIONS - THINGS TO THINK ABOUT

What distinguishes family relationships from relationships among partners?

What evidence do you have of your capacity to work as part of a team?

How much do you know about your partner's values, needs, and interests?

How capable are you of adapting to different situations?

What are your common objectives?

How good is your ability to accept and respect your partner?

Which of your attitudes and actions are appreciated or need to be corrected?

What contribution does each person make? (Role, responsibilities)

What qualifications does each person have? (Skills, knowledge, experience)

QUESTIONS - THINGS TO THINK ABOUT

(contd)

How capable are you of communicating your expectations, fears, satisfaction, etc.?

How do the wives see their role?

How can the wives contributions be recognized?

How deeply do you believe in partnership, the importance of teamwork?

What evidence do you have of your willingness to become involved?

1988 03 14

GOALSETTERS ARE GOALGETTERS

BARRY K. RUSSELL

We are going to be talking about goals and goalsetting but before we delve too far into the topic it is important for each of us to ask ourselves if we have goals in our lives, then if we do, the most important question is yet to be asked "How many of us have written these goals down?"

I congratulate everyone of you who have taken the initiative to write down your goals, you are already winners. You will achieve more than those who have never taken the time or opportunity to make the commitment for planning their lives.

If you have never written your goals don't despair it is never too late to write them down. You can join an elite group of achievers now, to join this group simply write down your goals and develop an action plan to achieve them.

A statistical study has proven that only three percent of North Americans have written down their goals, ten percent have thought about their goals. Group one, that three percent that write down their goals outperform group two the ten percent who think about their goals by a margin of TEN to ONE. This means that for every thousand dollars group two generated group one generates ten thousand dollars, or for every one million dollars that group two generates group one generates ten million dollars. THAT'S IMPRESSIVE. I say to you "Don't think it, ink it!"

We have considered thirteen percent of the population but what of the remaining eighty-seven percent? Fifty percent of North Americans have considered some type of short term goals, anything that takes less than six months to achieve; and a whopping thirty-seven percent have never set a goal. In concrete terms this means that ninety-seven percent of North Americans simply react to situations, only three percent have developed a game plan for life that is leading them to the goals they have set.

Goalsetters face obstacles as others do, the big difference is the attitude of a goalsetter. The sights of the goalsetter are always on the horizon expectantly awaiting the achievement of yet another goal and more success; rather than at the base of the mountain, the problem never looks as large in the eyes of a goalsetter.

Everyone in this room has been conditioned to accept certain things as fact. This conditioning also leads us to develop blind spots, we must teach ourselves to live without limitations and overcome the blind spots we have come to accept as fact.

Goalsetters have large doses of two very important things (1) common sense and (2) faith. Common sense allows us to make use of either personal goals or the failures of others, goalsetters learn from past mistakes. There was only one perfect man on this earth and he

departed nearly two thousand years ago. So we all have the ability to learn from our mistakes. As farmers we all know that manure is the fertilizer of grass but it is important for us to realize that "failure is the fertilizer of success."

From tried and true mentors and friends, goalsetters can develop a network of people to supply them information they know to be true by the faith they have in these people. The support network of goalsetters is important to develop as there is always someone lurking around every corner waiting to rain on your parade; always remember goalsetters are few and far between and those who are not setting goals will be the first to tell you that goalsetting does not work at the slightest setback.

I have been quite general in this goalsetting discussion but "What is a goal?" Quite simply a goal is the object of effort or ambition. It can be compared to the pot of gold at the end of the rainbow only much more attainable. We have all chased a rainbow as a child never coming any closer to the elusive pot of gold, as adults with written goals, a specific plan of goal achievement, and a time frame the object of our efforts can be realized time and time again.

To qualify a goal must have five qualities:

(1) **CONCRETE** "I am going to be rich." This statement is not a goal. This is an abstract idea as rich means something different to everyone you meet. Rich to some people may mean money while to others it would mean friends. "I will be a millionaire by age fifty." This statement qualifies as a goal as the statement is concrete and means the same thing to everyone.

(2) **MEASURABLE** "I will be a millionaire by age fifty." The statement also lives up to the second requirement of measurability. The goal to become a millionaire (have a million dollars) is definitely measurable in terms of dollars and by age fifty makes it measurable in terms of time. As goals mature at different rates you will note that short term goals mature in less than six months, intermediate goals mature between six months and two years, long term goals take more than two years to mature.

(3) **UNDERSTANDABLE** returning to the "I am going to be rich" statement, this is not easily understood by people with different experiences and backgrounds. A goal must be something that your mind can understand as well "WHAT YOU CAN CONCEIVE YOU WILL ACHIEVE". The term rich is abstract where one million is something that can be grasped by everyone. If the concept of one million dollars is outside a persons realm of experience break it down to bite sized pieces that are understandable, one million is ten one hundred thousand dollar blocks if the one hundred thousand dollars is still not easily understood break the one million dollars into one hundred ten thousand blocks "NOW THAT I CAN UNDERSTAND."

(4) **ATTAINABLE** It is fine to dream a little while setting goals but the goal that you set must be attainable. People have physical limits beyond which they cannot go, it does not make sense for a 140 pound male to set a goal of becoming the World Heavyweight Boxing Champion, he has some physical limits that just will not permit the attainment of this idea as a goal. It is important to note however that limitations are psychological barriers. These are barriers that we establish ourselves and rest safely within, these barriers can be removed or overcome and we can

achieve goals that we previously felt were unattainable.

(5) CHALLENGING To be truly a goal the object of our focus must cause us to stretch ourselves to beyond our comfort zone. We must utilize all of our abilities and use them in new and unfamiliar ways, repeating the same tried and true uses of our ability will not lead us on to the discovery of new opportunities and goals. Utilizing our abilities and setting our sights on the horizon always looking for new tests of our goalgetting capabilities and we will enjoy more and more success.

Goalgetting and goalsetting is a process that we can learn just like many other things. Each one of us has the power to choose the path of life for ourselves, to learn and use the goalsetting process or to be pushed one way or another by the circumstances of life.

To put this process to work in your life the following steps must be followed :

- 1) Write down your goals.*
- 2) Establish a time frame for goal maturity.*
- 3) Plan for the achievement of your goals.*
- 4) Implement the plan.*

We have discussed that goalsetters are goalgetters but consider : goalgetters are goalsetters.

FIVE TRAITS OF A GOOD PARENT

PREPARED BY:

**DON SHAW, CO-ORDINATOR
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A good parent...

believes that kids are basically good

believes that kids can do what you want them to

gets on kids feeling level

has a good self image

is consistent

21 MEMOS FROM YOUR CHILD

1. Don't spoil me. I know quite well that I ought not to have all I ask for-- I'm only testing you.
 2. Don't be afraid to be firm with me. I prefer it, it makes me feel more secure.
 3. Don't let me form bad habits. I have to rely on you to detect them in the early stages.
 4. Don't make me feel smaller than I am. It only makes me behave stupidly "big".
 5. Don't correct me in front of people if you can help it. I'll take much more notice if you talk quietly with me in private.
 6. Don't make me feel that my mistakes are sins. It upsets my sense of values.
 7. Don't protect me from consequences, I need to learn the painful way sometime.
 8. Don't be too upset when I say "I hate you." It isn't you I hate but your power to thwart me.
 9. Don't take too much notice of my small ailments. Sometimes they get me the attention I need.
 10. Don't nag. If you do I shall have to protect myself by appearing deaf.
 11. Don't make rash promises. Remember that I feel badly let down when promises are broken.
 12. Don't forget that I cannot explain myself as well as I should like. That is why I'm not always very accurate.
 13. Don't tax my honesty too much. I am easily frightened into telling lies.
 14. Don't be inconsistent. That completely confuses me and makes me lose faith in you.
 15. Don't put me off when I ask questions. If you do you will find that I stop asking and seek my information elsewhere.
 16. Don't tell me my fears are silly. They are terribly real and you can do much to reassure me if you try to understand.
 17. Don't ever suggest that you are perfect or infallible. It gives me too great a shock when I discover that you are neither.
 18. Don't ever think that it is beneath your dignity to apologize to me. An honest apology makes me feel surprisingly warm toward you.
 19. Don't forget how quickly I am growing up. It must be very difficult for you to keep pace with me, but please do try.
 20. Don't forget I love experimenting. I couldn't get on without it, so please put up with it.
 21. Don't forget that I can't thrive without lots of understanding love, but I don't need to tell you, do I?
-

FIVE TRAITS OF A GOOD PARENT

WHO'S PROBLEM ?

DON SHAW

**GUIDANCE COUNSELLOR
DENVER, COLORADO**

TALK AND THINK ABOUT THE BIG THINGS

(BUT IT'S THE LITTLE THINGS THAT COUNT)

TWO BELIEFS

PEOPLE ARE BASICALLY GOOD

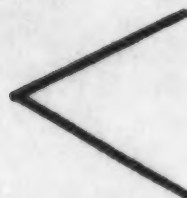
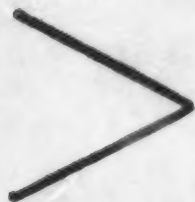
PEOPLE CAN DO WHAT YOU WANT THEM TO DO

THREE SKILLS

HAVE THE ABILITY TO PUT YOURSELF ON
THE SAME FEELING LEVEL OF THE PERSON
YOU ARE WORKING WITH.

HAVE A POSITIVE SELF IMAGE.
CAN BE CONSISTENT OR OPEN.

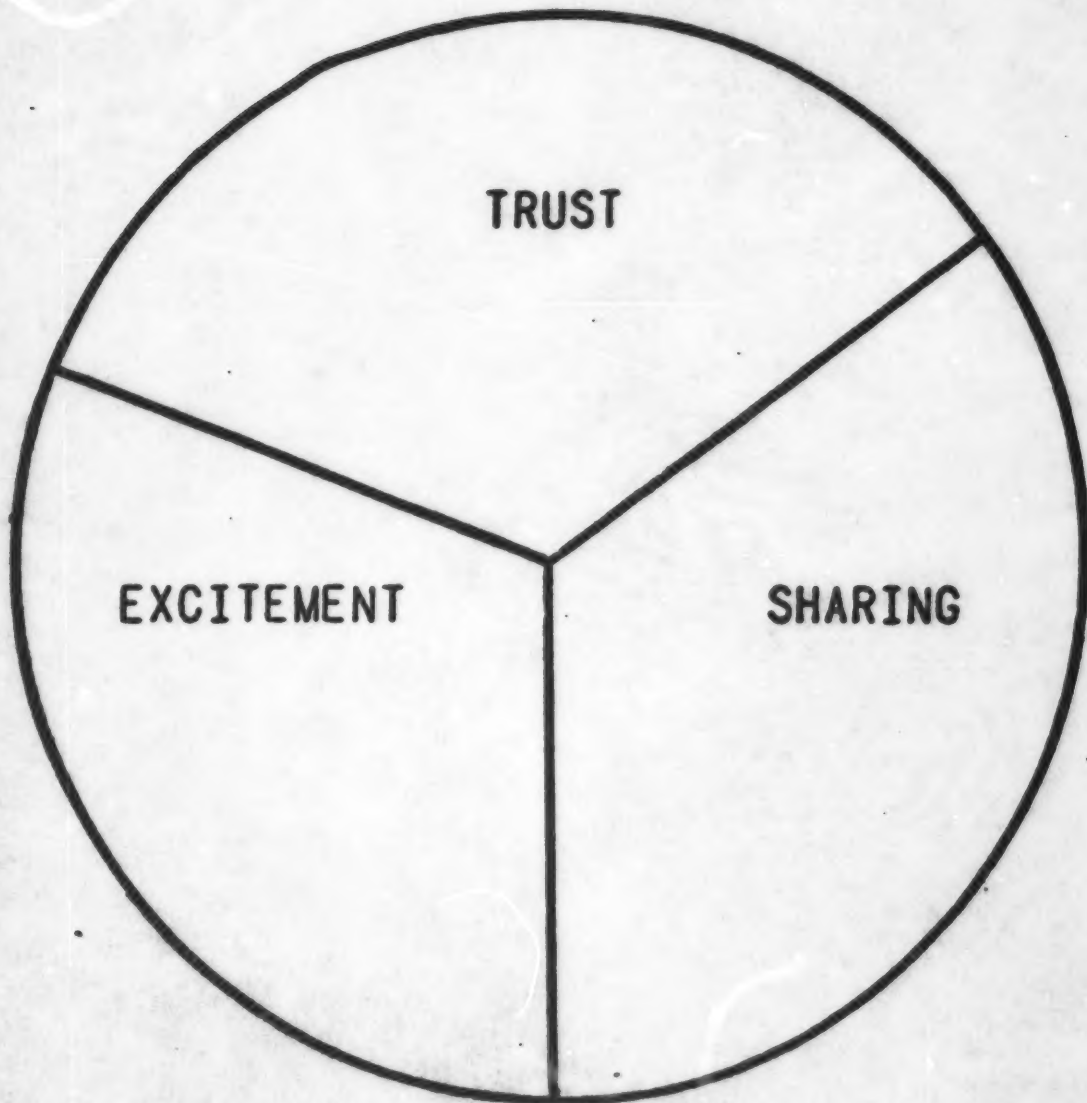
TECHNIQUE



MALE
100

FEMALE
100

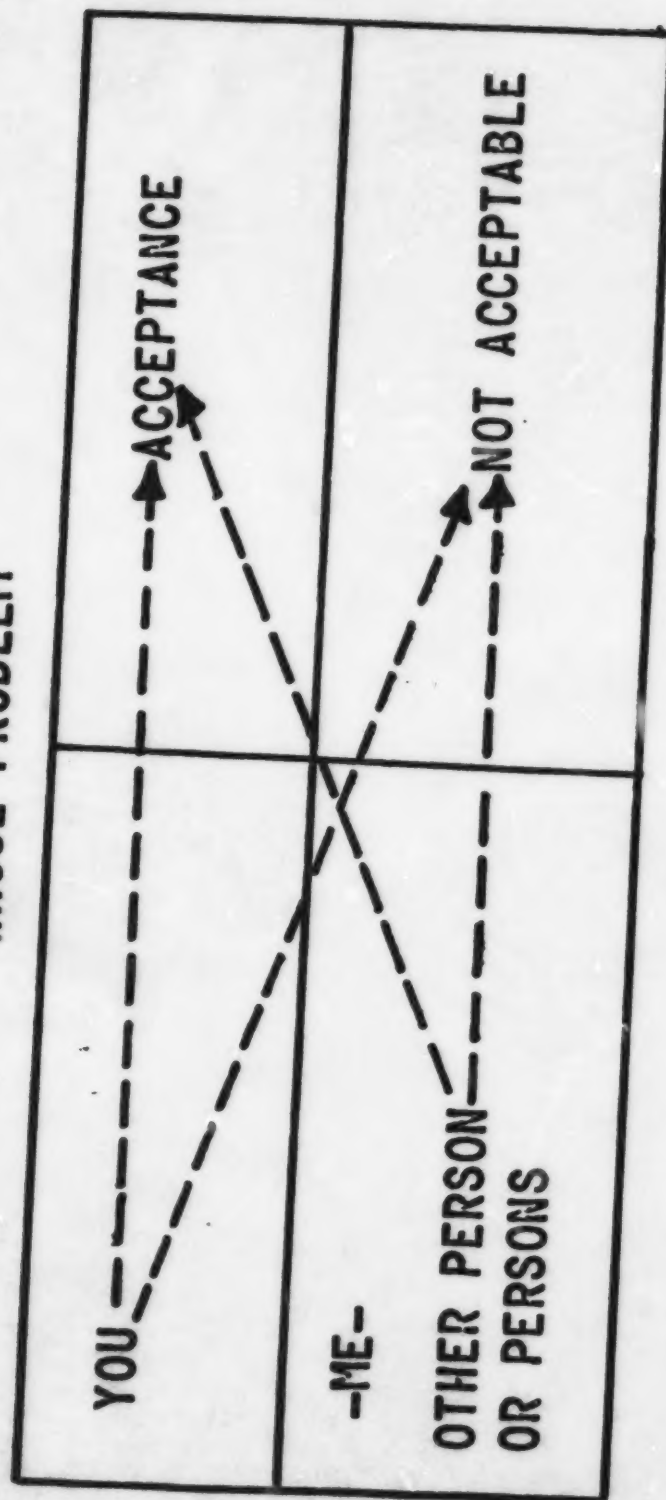
FOUND IN A GOOD FAMILY



COMMUNICATIONS

1. NON-VERBAL
2. PHYSICAL
3. VERBAL
 - A. FIRST PERSON
 - B. SECOND PERSON
 - C. THIRD PERSON

WHOSE PROBLEM



MINIMUM 3 YEARS

MAXIMUM 7 YEARS

LOVE

POSITIVE STIMULATION

PEER PRESSURE

NEGATIVE STIMULATION

KNOWLEDGE

ESCAPE

AGRICULTURE: CHANGE OR INTEGRATION

Agriculture and Technological Change

Angèle St-Yves, Engineer and Agronomist*

Technological conversion could convert your future too. It would be a good idea to start thinking about this right now, because it is coming very fast anyhow. Although some changes may be more harmful than they are helpful, most, on the whole, aim at progress.

I shall begin my remarks with the very appropriate words of Simone de Beauvoir: "Those who do not want anything ever to change invariably shed tears over the marvellous past that is slipping away, without even a little smile for the nascent future."

Occasionally, our mothers remind us that the marvellous past also had its share of discomfort and hard work. They do not always regret having swapped farm implements for the machine.

1. Technological Change

The marvels of technology have helped to change the environment of agriculture: over the centuries, industrialized agriculture has supplanted subsistence farming. In Québec, technological change in agriculture is destined to continue at lightning speed during the next few decades. The development of international markets and the emergence of new environmental, economic, and nutritional concerns are requiring unequalled performance from farm operations, and from now on, the new technologies will become an indispensable support.

What is technological change? It is the conquest of fire, the invention of the tool and the wheel, harnessing the energy of steam, oil, and electricity, the arrival of the machine, the exploration of the sea and space, and so on. All the comforts and material well-being of daily life in North America today in 1987 have resulted from the development of numerous technologies and production facilities.

*Angèle St-Yves, M.Sc., Vice-President of the Ordre des agronomes du Québec.

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Conference on Women in Agriculture
at the Château Frontenac, Québec City
November 10 and 11, 1987

It is an irreversible process, but it can be controlled. Becoming aware of its reality means recognizing its importance. It also means agreeing to become involved in it so that it can be made to meet our own needs and those of society properly.

How can women in agriculture, as individuals and as a group, react to this phenomenon, which could disturb their professional future?

2. Women in Agriculture and Technological Change

2.1 Mechanization

It is a well-known fact that the mechanization of farm operations has disrupted the organization of work. First of all, it interfered with the work usually done by women: hoeing, sowing, weeding, manual milking, etc. These techniques alleviated the burden of work and were very much appreciated, for good reason. However, at the very same time, women were losing the experience they had acquired, and were relegated to the more subsidiary activities of farm operations, jobs deserving less recognition and offering less self-actualization as professionals; jobs such as replacement and stopgap work, as you, in fact, pointed out.

2.2 Automation

Automation will further improve the well-being of workers by eliminating tiresome tasks and reducing working hours. An operation's profitability may be increased. Also, human errors are eliminated. But beware! The activity that used to be yours could disappear, and thus make you lose even more of the experience you have acquired.

In either case, you will have to start from scratch again to attain self-actualization.

2.3 Experience

Wives of farmers have been hesitant to openly soften their attitude toward mechanization. And yet, farm women, either through inclination, necessity (replacement), or training, have often acquired considerable technical knowledge about various facets of production. Such jobs as milking, livestock feeding, harvesting, preservation, etc. are part of the daily lives of many of these women. Even this technical knowledge, often acquired by dint of working on the farm, is not acknowledged, or acknowledged only when the husbands are absent. Our mothers were treated as knowing the techniques when our fathers were away. But the minute they returned, our mothers once again faded into the background and went back to their inferior tasks. That is what I call yo-yo recognition! Some even dare to go so far as insisting that science and technology are not women's prerogatives. This prejudice will have to be refuted. But it can't be done from the sidelines.

2.4 Means

Faced with technological changes, women in agriculture will have to keep an eye open for problems and remain able to use the new tools offered by science and progress just as cheerfully as the old. Technological conversion must not signify women's definite abandonment of farm work, or their conversion into simple push-button operators. On the contrary. Women in agriculture must become aware of prospective changes, take full measurements of current technological changes, and understand the absolute necessity of acting when required.

You must therefore take the proper measures to acquire the technical knowledge needed to make decisions on the integration and use of the new technologies in your operations, whether they be big or small.

This way, you will manage to:

- . prevent stagnation (disappearance of activity)
- . respect the quality of life, ecology, and the environment
- . protect the property you intend to pass on
- . protect family relations
- . control debts
- . etc.

Let us have a look at how control over technologies can be exercised.

First of all, you have to be able to place your particular operation in the context of the whole agri-food chain. Then, you must understand the whys and wherefores of the new technologies and decide where they will be introduced if they are necessary. Lastly, you must be able to dissect all the stages of production in your operations, look at who is in charge of each stage, study who will be affected or helped by the technology, and how she or he will be concerned.

This is how you will learn to define the limits of technology, the underlying or restricting safety factors. You could even direct your research toward technological development or adaptation.

3. The Agri-food Chain and the Farm Operation

The agri-food chain is a simple concept once you realize that natural resources and human resources constitute the basis of agri-food activity. Then, productions from these resources must be adapted and of the proper quality to meet the demands of efficient processing of products and the very diversified markets, as illustrated in Figure 1.

Resources Productions Processing Markets

Figure 1: The agri-food chain.

Subsequently, you must think about the position of your operation in this continuum, study the influence of the other links on the chain link selected, and understand its impact on the others. For example, dairy production is influenced by the market offered, which demands various types of processing of the original product. In addition, you have to look at the effect of this production on resource conservation (soil, water, energy, etc.), and on the availability of manpower for the farm.

Such an elementary procedure sheds light on potential directions in the development of agriculture.

4.0 The Agri-food Chain and the New Technologies

How are the new technologies integrated into this process?

Obviously, they revolve on the axes of resources, production, processing, and markets.

4.1 Resources

The soil, water, and energy resources will have to be utilized rationally so as to protect the environment and the agricultural heritage for future generations. Techniques must be there to serve human resources, not the other way round. The new operating procedures will take these requirements into account. They will counteract soil and water degradation (washout and wind erosion, soil subsidence, loss of organic matter, acidification, contamination) and be great energy savers. They will support recycling efforts and efforts to upgrade waste. Better knowledge of the climate and the development of behaviour models based on the climate will help to provide extraordinary control over various aspects of production.

4.2 Production

Production will benefit considerably from developments in genetics and in animal and vegetable growth control focused on obtaining sought-after products. The arrival of growth hormones, embryo transfer, integrated pest control, the development of nitrogen-fixing plants, the appearance of new hardier varieties, better adapted to Québec's climatic conditions are examples of such progress.

Development of heavy-duty equipment is continuing. Various operations in breeding, feeding, milking, ventilation, cleaning, etc. are being automated. The same is true for the automation of greenhouses management, fruit harvesting, and irrigation. Remote-control tractors and tillage equipment, as well as robots on the farm, will be ours in the near future. Some people are even dreaming of agriculture in space.

4.3 Processing

Traditional preservation techniques include sterilization, drying, salting, cooling, and freezing. A certain number of innovations have already appeared, such as aseptic packing and the use of cryogenic fluids. Furthermore, for the last few years, advanced techniques in gas-storage and irradiation preservation have made rapid strides.

The biotechnologies will lead to a new range of procedures based on fermentation and enzymatic potential, in addition to the already existing procedures of fractioning, concentration, and texturing. The nutritional value of foods and improvement of the general wholesomeness of farm products constitute the major concerns of technological developments in these fields. Food will have to be free of all waste, pesticides, hormones, and preservatives.

As well, reliable, flexible, and economic techniques will have to be applied in transportation and storage systems, from the harvesting site to the consumer's table. Do not lose sight of these factors!

4.4 Markets

Confirmation of better defined nutritional concerns and competitive markets will make it necessary to establish highly refined economic and technical management technologies. Products will have to correspond with the demands of consumers, whose habits are currently changing. Senior citizens have dietary needs that are quite different from those of the generation in their thirties and forties. Young people tend to choose bite-size ready-to-eat food. We know that population percentages are changing fast: the number of older people is increasing, while the number of younger people is decreasing. Exportation too, has its share of requirements and restrictions that have to be taken into consideration, because they have an impact on other production chains.

It is a funnel through which all production must pass.

4.5 Data Processing

Computers allow more immediate and rational management of processes that are very complex even on a reduced scale. Microcomputers will therefore become more and more common on farms whether we like it or not. This new integrating technical tool may revolutionize the whole of farm management, and its only limitations are the software it ingests and the operator who activates it.

In addition to doing the accounting, the microcomputer can calculate a feed ration or an amount of fertilizer, provide a review of the fields, or follow-ups on productions, etc. The information that can be stored and processed is endless: data on vegetable production, livestock production, crop rotations, agricultural chemistry, yields, transportation, machinery, repairs, maintenance, behaviour models, purchases, sales, market conditions, etc. And best of all, this information is accessible at any time. Connections outside the farm may be established, and a report of activities, even technical, may be prepared right away.

Managing this technical data bank develops a kind of key person, who is aware of everything that goes on in the farm operation, has an overall view, and a knowledge of the details. Such persons may do the operations or make the required corrections at the proper time. If they know how to interpret the results, this will be acknowledged. Otherwise, they will be classified as push-button operators, almost ignored when decisions are being made because they do not know the effects associated with the collection of data. A trap for women in particular is the recurrence of the boss-secretary relationship.

Data processing forces us to list all activities associated with production. Such an exercise may reveal tasks you forget to include at the moment, and consequently you do not attach any value to them.

The computer functions logically. If you forget to inform it of an operation, it becomes unhinged. It is a good master, but it can behave like an idiot.

5. Women in Agriculture and Technical Training

There are over 5,500 recognized women farmers in Québec. Recent studies show that you are interested in acquiring the knowledge you consider indispensable for the success of your professional activity. Recognition of the technical knowledge you have acquired or of your technical training form part of your equipment.

Modern agriculture is gradually forgetting the physical effort involved and insisting more on superior technical training. In the United States, more and more farmers have diplomas from universities or diplomas in advanced technology. Young people know very well that women have to become integrated into this movement and take up the new challenge. Consequently, the need to become familiar with technological changes is imperative for all of them. They must not let themselves be passed by; they must become involved in these fields of learning. In no way must certain spheres of science be restricted to certain types of individuals, or be labelled as incompatible with the nature of women.

You must avoid the trap of learning only how to operate a computer; you must also learn how to interpret what it produces. The poor little product might not be in good shape. If you find technology intimidating, demand helpful and adapted learning opportunities that will enable you to get to know it, master it, and use it properly. You must ask questions and demand answers.

There are several opportunities available to women in agriculture to improve their technical knowledge. First of all, agricultural extension officers, local or regional, provide technical information relevant to different types of production. Consult them when questions come up. Also, all training courses for farm operators must include learning the new technologies. These courses are given locally or by correspondence. Technical courses on video, that can be taken quietly in your own living rooms, represent a solution accessible to many.

Information sessions organized by women farmers, federations of specialists, etc. can be a springboard for launching into a specific technology. In addition, the media are excellent vehicles for introducing the public to new technologies. First and foremost, this kind of effort makes it possible to adjust to technological conversion or to convert your operation (family or cooperative) accordingly while you preserve your quality of life and the inheritance you intend to pass on to the next generation, with full knowledge of the facts.

6. Conclusion

For women in agriculture, the legal and union recognition acquired up until now has been fragile and could suffer setbacks if you refuse to become involved in technology. To understand one another, you have to speak the same language as your counterparts; otherwise, it will be the Tower of Babel again.

In any case, it looks as if methods of production, organization of production, and organization of work will be forced to change. So it is just as well to take part in the change. In the field of technology, emotions on both sides are better contained if there has been adequate training.

Approaching technological conversion positively prevents blind and insidious subjection to technology, and it shields man's destiny from becoming a slave to technology. A confident attitude makes it possible to focus more on the application of techniques as an extension of human and family activity and creativity in farm operations.

And so, the technological activities of women farmers, far from being occasional and sporadic, will become recognized and catalytic in the development of agriculture on our land here at home; and it will have to be known and recognized by all those involved in agriculture for the greater welfare of society. Just one more reason for being proud to be a woman farmer.

To paraphrase Socrates, I believe that we can only live better if we try to become better, and only more pleasantly if we are totally aware of our improvement, even technical. And what about when others notice this, and what is more, admit it. Growing familiar with technological change signifies development, development in agriculture as well as in other fields of science. And women in agriculture are quite capable of this too.

MANAGING TO SURVIVE....OR SURVIVING TO MANAGE

by
OLIVER WALSTON

Make it '90

March 11th 1990

St John, New Brunswick

There hasn't been anything like it for five thousand years. That was the day when a man (or probably a woman) first planted a seed in the aptly-named Fertile Crescent in what is today Iraq. Since then, farmers have enjoyed prosperity and poverty as cycles came and went. But nothing in this whole period could possibly have equalled the riches enjoyed by European cereal farmers in the twelve years between 1973 and 1985. Cereal growing was, as that famous Canadian, Lord Thomson, once described the TV business, "a licence to print money".

Today, using the hindsight for which we have become famous, European farmers can recognise how fortunate they were throughout the 1970s and early 1980s. But at the time we sang a very different song. Did the agricultural press echo with grateful farmers thanking the politicians and the taxpayers for their generosity? Did the National Farmers Union (the only farmers' organisation in Britain) admit to its extraordinary good fortune? Did anyone in the entire industry have the grace - or even the commonsense - at least to keep quiet? No.

On the contrary. Throughout this Golden Age of Cereal Farming, the loudest noise in the countryside was the sound of farmers bemoaning their fate.

With each succeeding year the agricultural lobby grew ever more vociferous as it told a bewildered public that unless prices were raised the industry would go bankrupt and Europe would certainly starve. The campaign was brilliantly successful. Intervention Prices (which had been devised to provide a safety net to prevent widespread bankruptcy) crept ever upwards until, at the end of the period, they were actually above the market price. In the lunatic asylum called the Common Agricultural Policy, the floor had become a ceiling. The world was upside down.

Prices were not the only cause of British farmers' discontent. There were the usual wails about the bad weather, the unfair competition from abroad and impending disaster from a multitude of sources. Of course, our ideas about what was unfair needed a bit of explanation. It was, for example, perfectly fair for a farmer

to buy cheap weedkiller from France, but it was grossly unfair for cheap French poultry to be sold to English housewives. Grey imports of tractors from Belgium, sold at well below list price, were considered well within the norms of free enterprise, but imports of Danish Bacon and French Golden Delicious apples were objected to as a violation of free competition. To a farmer, fairness has always been a very flexible concept.

Today, with the benefit of history, we can look back nostalgically to an age when even the worst cereal farmer could make money. The good ones made small fortunes and the excellent farmers became very rich indeed. Incompetence alone was not a reason to lose money. No, to do this with any certainty, you needed to be more than just incompetent. You also needed to have an extravagant wife and an addiction to roulette. Provide a man got up before midday, managed to scatter a few seeds in the autumn, and was prepared to harvest the crop the following summer, there was no way an cereal farmer could fail to make a profit.

What caused this explosion of farming prosperity right across Europe? Three main reasons.

1. Nations, scarred by the experience of the war, were desperate to ensure that never again would Europe depend on outside sources for food. Self-sufficiency was the altar at which all postwar politicians worshipped. They were also acutely aware that, in the 1940s and 1950s at least, the farm vote was still crucial. Keep the peasants happy and you also enjoy social stability. Thus was born the EEC and the Common Agricultural Policy with its guaranteed high prices.

2. The continued failure of the Russian agricultural system - caused, of course, by the unbroken run of bad weather they have had ever since October 1917 - allied to rising living standards in the USSR, meant that they needed vast quantities of grain. This reached a peak in The Great Grain Robbery of 1972 which boosted world prices to unheard-of levels.

3. An agronomic revolution in which the yield of cereals doubled in a decade. This was caused by another three main reasons, none of which would have happened without the prosperity brought about by the Common Agricultural Policy. These were (in no particular order):-

- A. Plant Breeders Rights gave an incentive to spend time and money breeding new varieties of cereals. Maris Huntsman wheat, which virtually doubled our yields, was the classic example of this.

- B. Chemists began to come up with a range of fungicides to control cereal diseases which no farmer had even heard of. Bayleton, the penicillin of cereal farming, was the first of these.

- C. New techniques, developed largely (but not exclusively) in Belgium and Germany, showed cereal farmers that they could

intensify their systems by using more fertiliser, more chemicals and more care.

I entered farming in 1972. In the following decade I could not understand the old fuddy-duddies who were constantly harping back to the Bad Old Days of the 1930s. Farming, for me anyway, was child's play. I should have realised that human beings' attitudes are invariably formed by their early experiences. Thus the men who had grown up in the '30s remained cautious and pessimistic for the rest of their lives, while I - a child of the booming '70s - was optimism personified. And for a decade or so I had figures to show that I was right.

On my farm at Thriplow in the east of England, wheat yields rose from 70 bushels per acre to almost 130 in less than ten years. At the beginning of this period, I used to have arguments with my Father about spraying fungicide on a field of winter barley. The discussion consisted of whether the damage done to the crop by the sprayer wheelings would be greater or less than the good done by controlling the mildew!

Then in 1977 came my conversion. It took place not on the road to Damascus but in the middle of a wheat field between on the Baltic coast of Germany. I had spent an entire day on the back of a Unimog driving through (not round) the sort of wheat crops I had not even dared dream about. I returned home full of enthusiasm for prophylactic spraying, tramlines and all the other paraphernalia of intensive cereal production.

I became obsessed with counting and quantifying everything so I could talk knowledgeably about seeds, plants and ears per square metre. Split nitrogen applications, split growth regulator applications, sequential fungicides, pre-emergent herbicides, insecticides in the autumn against barley yellow dwarf virus and in the summer against aphids all these became part of my normal life. Each year I went to ever more learned conferences at which clever people (mostly paid by the chemical companies) proved conclusively that if I were to put on still greater inputs, my profits would rise. And, I have to admit, they were usually correct.

The enthusiasm was contagious. Farmers became infected overnight as lengthy (and sometimes heated) debates broke out between the advocates of Laloux (the Belgian system) or Schleswig-Holstein (the German system). For a couple of years it was even possible to spot the "infected" farms from a car or train. Tramlines stood out in the landscape like the scars on a drug addict's arm. Within a very short time, the tiny island of Great Britain, with a population two and a half times greater than Canada's but with less than a third of the agricultural land, became a net exporter (repeat, exporter) of cereals.

I was lucky. I came into farming as the dawn of this new age was breaking. Unlike my father's generation, who were certain that once again farming was going to fall over the precipice into bankruptcy and ruin, I knew that things could only continue to get better as a grateful and hungry world pressed us to "plant

from fencerow to fencerow".

My biggest problem was what to do with the profits I kept making. The solution was simple. I converted them into machinery by taking advantage of the 100% tax write-offs we were allowed. Of course, there was one disadvantage the bank overdraft kept rising as I borrowed more and more to fund the purchases of bigger and bigger equipment. Tractors, combines, grainstores, grain driers came in profusion. Just as I felt I should stop investing and concentrate on reducing my borrowings, along came Brussels and gave me even bigger capital grants to encourage still more investment. As a result, I bought lorries and tractors with even greater abandon, safe in the knowledge that I was doing what the EEC wanted. No wonder the machinery trade had to ration tractor deliveries as other farmers competed with me to buy everything the factories could turn out.

But I was not content simply to spend money on machinery. That was too easy. I also realised that it was crucial to own more land and so managed, over an eight year period, to buy 300 neighboring acres. As the price rose from \$2000 to \$4500 an acre, I knew I had made the right decisions. Not only did these purchases increase the size of my farming enterprise, but they also proved to be spectacularly good capital investments. My shrewdness never ceased to amaze me.

Today, in March 1990, what I have just described above seems almost like a fairytale, or at very least like the ancient history of a distant planet. In less than five years, the whole farming landscape has altered immeasurably. I find myself faced with a problem, not of how to spend my profits, but how to survive. It is not a pleasant feeling, but it is not an entirely new one either.

I first came face to face with agricultural hardship when I visited Nebraska and Iowa in 1982. I had made a special request to the Farm Bureau to meet bankrupt farmers. Hearing that there were severe problems in this part of the States, I felt it would be instructive if I could actually speak to people who had failed to keep their farms afloat. I expected, of course, to meet a bunch of incompetents a group of people who never got out of bed before 10 in the morning, who planted their seeds a few weeks later than their neighbors, who forgot to spray for weeds and who never managed to combine the crop before it rained. In other words, I expected to meet some spectacularly bad farmers.

As usual, I was wrong. The bankrupt farmers of Nebraska were clearly above average. They were energetic, keen and had good track records. It was not their farming which was faulty, it was their enthusiasm. Such was their desire to expand their farms, to put up a new silo or milking parlour, to buy more land or a bigger tractor, that they had borrowed too much money. They were, in the jargon so beloved of Americans, over-leveraged.

Today, after a moderate harvest in 1989, the view before me at Thriplow is, I admit, slightly better than it was four years ago. I still owe the Agricultural Mortgage Corporation a whole heap for the land I have bought. I owe the another heap - albeit much

smaller than it used to be - to the Bank. At least I don't any longer owe the leasing companies for all the machinery I bought - and have now paid for. But last and definitely not least, I owe my landlord a rent of \$100 an acre. It is not a pretty sight.

Will I survive to manage my farm? Yes, but it will not be easy - at least not compared to the balmy days of the 1970s. But I shall succeed, without any doubt at all.

There are some things which I shall not do. I shall dispose of these before going any further.

A. I shall not try to increase output - any more than I have been doing for the past decade. I shall not increase my inputs to chase that last ounce of output. I must admit, however, that I shall continue to use a very high-input system in an attempt to produce as much as is practicable from each acre of land.

B. I shall not diversify into new-fangled crops such as lupins, evening primrose or borage. I may increase the acreage of legumes and it is not impossible that over the next few years I might even dabble with linseed. But I shall remain primarily a cereal producer since this is what my farm is best suited to grow.

C. I shall not extensify by adopting an Alberta-style of farming. This is the system whereby dad and son run 3000 acres with the help of two huge tractors, a set of discs and a couple of combines. They use little or no inputs and produce (in a good year) two and a half tonnes of wheat to the hectare. I could only make this Low Input system work if I also had Low Input Costs. Unfortunately, I do not. Like poor old Sisyphus in Greek mythology, I have to expend a lot of energy simply to stay where I am. My Fixed Costs (of which more later) dictate that I have to go flat out for maximum production.

Of course, if my Bank Manager, landlord and other creditors all let me off my obligations so I could wake up one morning free of all debt, then I would be mightily attracted to a Alberta-style way of farming. But until this miracle comes to pass, it will remain a dream.

D. I shall not convert to organic farming. Even with the high prices being offered for organic wheat, I simply could not afford to have over half the farm down to clover, lucerne and grass. I have a strong (but unproven) suspicion that every organic cereal farmer in Europe is either an owner-occupier paying no rent, or a tenant paying very low rent. I would be happy to be proved wrong, and even happier to meet an organic cereal farmer whose landlord, like mine, expects to receive \$50 per acre.

E. I shall not intensify the farm by introducing more livestock. At least I don't think I shall. I am not a good stock man temperamentally, and my experience with our old Jersey herd has given me a deep-seated prejudice against cows.

F. I shall not be unduly concerned about controlling variable costs.

Of course I shall continue trying to buy my inputs as cheaply as possible. In common with most farmers, I happen to think that I am superb buyer. Whether I really am is another matter altogether, but you should allow me a few illusions. Nevertheless, the fact remains that I am almost powerless to control the Variable Costs. If fuel or fertiliser prices fall, I enjoy the benefits, and if agrochemical prices rise, I pay the increase. Either way I am virtually impotent.

If I do Manage to Survive, I shall Survive to Manage simply by controlling my Fixed Costs. These hold the secret to my future as a farmer, and it is on Fixed Costs that I shall now concentrate.

Last year (i.e. Harvest 1989) we incurred total Fixed Costs of \$400 per Hectare. Although this is not low enough, it is a lot better than the \$480 per acre we were spending in 1986. I managed to make this reduction by taking the following actions.

1. Perks. The single most difficult economy to make is to your own lifestyle. Nevertheless, I am certain that before I ask anyone else on the farm to make any sacrifice whatsoever, I must first be prepared to lead the way. Thus my beloved Porsche has been sold and my Private Drawings must be cut by 25%. You might be surprised how difficult it is to sell a fancy car. The reason is not just that nobody ever likes to have fewer luxuries, but one's pride rears its ugly head too. What will the neighbors think if they see me selling my car? Will they think I'm going bust? Will the local tradesmen refuse me credit? Will I lose face? These and other doubts must be stamped on firmly.

After reducing one's own perks, the next hardest task is to reduce those of one's father. As with most family farms, the elder generation depends on the farm to provide some (often all) of the cash for old age. But if the farm can no longer afford to provide these goodies, then the recipient must be told firmly that he (or she) will also have to tighten up on perks or cash.

2. Labour. The Christmas Bonus is the first casualty. It had grown sturdily over the last decade and there is no doubt that some people had forgotten that it was a Bonus (i.e. a reflection of prosperity) and not part of the salary. But mucking about with a Christmas Bonus will not be enough. Today we employ only six people on 3000 acres. This is 33% fewer people than we did five years ago. This has been achieved largely by what Personnel Officers usually call "natural wastage" since of the five people who have departed, three did so in the course of retirement. One other chap left of his own accord and, unfortunately, one was made redundant.

3. Insurance. For the past 70 years my family have dealt with one of Britain's leading insurance companies. The service we received was excellent and, as a result, we were Happy and Satisfied Customers. Every year I would go through the policies with the local manager and the premiums would rise. Three years ago, however, I decided to get some competitive quotes from a Broker and from the National farmers Union. I was flabbergasted to see how expensive my insurance had become simply because—I had

never bothered to obtain a quotation before. As a result I have saved 33% on the cost of the premium, amounting to over \$7,000. The moral is clear customer loyalty is not to be underestimated, but in 1990 it may be a luxury we can no longer afford. The same will also apply to all the other things we have traditionally bought from a single source who happens to be "an old chum" or a "nice chap".

4. Property repairs. I enjoy the doubtful benefits of a Full Repairing and Insuring Lease and so I am always liable to receive a visit from my Landlord's Agent who will remind me to repair that gutter or paint that cottage. Hence I will not be able to save a great deal (if anything at all) on the cost of property repairs. However, when it comes to making improvements, there is a lot of money to be saved. No longer will we be spending \$14,000 a year on putting central heating into houses or building extensions to enlarge the cottages. This was all very well in the halcyon days of the 1970s, but it will have to be cut right back this year. Hence we can save around \$10,000 a year (\$3 per acre) by not carrying out improvements.

5. Rent. In England rents are adjusted every three years. If landlord and tenant cannot agree they go to arbitration.

After a titanic struggle with my landlord, which happens to be a Pension Fund, I have managed to get my rent reduced by 12%. In an ideal world this should have been a simple task since I should have been able to point out to my landlord that since all my costs have risen, my prices have fallen and my profits have shrunk, it was only just that my rent should come down too. Unfortunately, landlords do not see things quite this simply, and it took a lot of work by me and by my professional advisers to achieve even this small reduction. This job is, however, made much easier if the following tactics are used:-

a. Arm yourself with knowledge. The days when tenants could afford to keep quiet about their rents is long since gone. Find out what other tenants in your area are paying - and tell them what you are paying. That way you will know whether or not your rents are high or low. If they are the latter you should clearly keep quiet, but if they are high, you will need all the help you can get.

b. Use a Land Agent. I happen to be deeply prejudiced against the race of Land Agents which has, like aphids, gone forth and multiplied over the past decade. I must, however, admit that since we farmers have prospered, there is no reason why Land Agents should not have done the same thing. (And they have with a vengeance.) But I have recently had to swallow both my pride and my prejudice when I realised that tenants who did not use Land Agents to represent them at Rent Reviews invariably ended up with higher rents than those who did use Land Agents.

By taking action on the five headings listed above, I have reduced our fixed costs by at least 15% in the past three years. However, this alone will not be enough to make any real impact on the problem. I shall have to take a far more drastic step if I am to

succeed in bringing down my costs in a big way. This solution, unfortunately, can only be a temporary one.

6. Capital equipment. As mentioned earlier, one of the hallmarks of the Golden Days of cereal Farming was the very high level of capital investment. At the peak I found I was spending almost \$150 per acre on machinery. Today, of course, I can no longer afford such a very high level of investment. This year the figure has been reduced by no less than 80% to a measly \$27 per acre. In doing so, I shall save \$400,000. Or, to be more accurate, I shall not spend \$400,000.

However spectacular these economies may appear - and to reduce expenditure from \$480,000 to \$80,000 is pretty impressive - I cannot maintain them for very long. It is the equivalent of going onto a crash diet of warm lemon juice and lettuce. You may lose a stone in a week, but if you keep it up for much longer you become very ill and die soon afterwards.

Within a year or two I shall, of course, have to start replacing my machinery again. But it will give me a breathing space during which I can reduce my borrowings and put my finances in some semblance of order. Thank goodness all the machinery on the farm is as new as it is. We shall suffer no hardship for the next two years if we limit our replacements to the bare minimum.

The remaining fixed costs I can do very little to control, other than by keeping a wary eye on expenditure. Here I am helped by having a computer and a good budgeting system. I spend a lot of time at the beginning of the financial year working out a cashflow forecast and a budget. It is time well-spent because we are able to monitor these forecasts every month and thus get early warning if something is going seriously wrong. In today's tighter financial climate the computer has at last come into its own. Instead of being an amusing toy with which one could impress the neighbors and a few reps, it is actually a cost-effective tool which enables me to keep a far closer control over the finances than I could possibly hope to do with a conventional manual accounting system.

Many farmers will undoubtedly accuse me of, at best, overreacting or, at worst, simply panicking. Many will blithely assume that our industry's problems are no more than just a little temporary hiccup in the farming cycle. The surpluses will go away as quickly as they came and, once again, we shall be asked by politicians to produce as much as we possibly can. All that needs to be done today is to persuade the Bank Manager to give a slightly bigger overdraft than he did last year, and we can "ride this one out".

To do this is to confuse what one wishes to see happen with what one thinks will actually happen. A common but fatal mistake. Many farmers will convince themselves that little or nothing need be done on their farms other than to ensure that the crop is planted, fertilised and harvested on time. They are partly, but not wholly, right because there will never be any substitute for old-fashioned good husbandry. You may be the cleverest businessman

with the best computers and biggest tractors if you neglect the
farming you will still be a failure.